

# University News

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**RAVIKALA KAMATH & DEEPA SHARMA**

## **Industry-University Partnership —A Double Benefit**

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# Industry-University Partnership — A Double Benefit

Ravikala Kamath\*

Deepa Sharma\*\*

One of the most important objectives of education is to churn out knowledgeable individuals who will contribute to the society actively, find gainful employment and develop a positive attitude towards life. Education is also the mode through which culture is transmitted and transformed and social functions and status are reproduced and created (UNESCO, 1991). Poignantly, these purposes are not fulfilled by many of our Indian Universities.

At the same time industry is also facing a major crisis. In this era of financial crunch the industry is compelled to spend extra resources to reeducate every new entrant. The creative talent is on the wane. Industry has to contend with graduates who have sound theoretical background but lack practical competencies for communication and interpersonal skills (Coll, 1996). There is no linkage of what is taught in universities and what is required in actual field of employment.

Today we are confronted with a dilemma defying solution — high unemployment coupled with many unfilled vacancies. There is on the one hand terrible unemployment problem and on the other hand employers both private and public undertakings are complaining about inadequate availability of educated, especially skilled manpower in a large number of essential services as well as key hightech sectors (Nath, 1990).

The solution to this impasse seems to lie in better and interactive industry-university ties. Society is the input of the university system and the output should be a wiser society (Saxena, 1990). The very purpose for which education is undertaken can only be fulfilled if an individual gets a meaningful and relevant education. An education that can be used in day to day life. Industry-university linkages will ensure that universities produce what is required of them in industries and industries cater to the needs of universities.

The university-industry tie up is beneficial not only for the education centres i.e. the universities and the work centre i.e. the industries but also the student and worker i.e. the individual (see fig. 1 and fig. 2). It is a symbiotic relation where the three viz. — university, student and industry depend on each other and are benefited mutually by this dependence (Coll, 1996 and Michaela, 1997).

### Benefits for the University

1. Opportunity to attract additional funds for teaching and research thereby facilitating financial autonomy.
2. Acquisition or access to latest technology.
3. Improved employment prospects for students.

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4. Development and adaptation of curriculum.
5. Enhancement of the universities' image as a contributor to the economy.
6. Increased motivation in students so problems of poor attendance, campus indiscipline will be automatically solved.
7. Socially relevant and progressive education.
8. Supplemented income from consulting, allowing academic staff to improve their salaries.

#### Benefits for the Industry

1. Reduction in recruiting costs.
2. A chance to preview students.
3. Access to prescreened, high achieving students.
4. Cost effective productivity.
5. Better communication with higher learning centres.
6. Collaborative research opportunities.
7. A highly dedicated think-tank available.

#### Benefits for Students

1. Gaining real life practical experiences.
2. Application of theoretical knowledge.
3. Contact with practising professionals.
4. Enhancement of oral and written skills.
5. Decision making on career choice.
6. Paid preemployment (on-studies training).
7. Gaining access to sophisticated instrumentation.
8. Understanding the work culture of industries.

#### Possible Areas of Linkages

The university-industry linkages can range from simple consultations or visits to indepth researches. For the sake of classification, the following broad categories of linkage mechanisms can be distinguished (Michaela, 1997).

- i) Consultancy (both by university staff and industrial experts).
- ii) Teaching and curriculum development (jointly developed degree courses, exchange of staff, latest scientific discoveries).
- iii) Research (sponsored research, providing R&D expertise in business development, joint research).

- iv) Others (mutual visits, jointly organised meetings, conferences, seminars, joint publications, joint participation in exhibitions & fairs, sponsorship to students etc).

#### Conclusion

In the changing times the need for better industry-university linkages is compelling. If education has to keep pace with the technological and job market changes it has to take a step towards the industries. And if industries have to become cost effective and efficient they will also have to ask help from the universities. In partnership can be found common goals, shared initiative, the mutual eagerness to create, integrate and spread new knowledge. In this mission the human resources have to be involved. Process of educational reconstruction and transformation is a peoples' movement and when people are involved nothing can fail. Together a strengthened society can emerge, a better future and relevant education can flourish and happy productive individuals can thrive.

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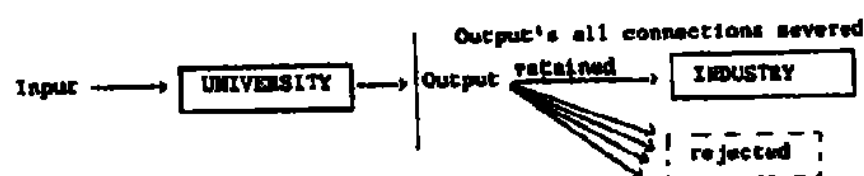


Fig. 1 : The Present System

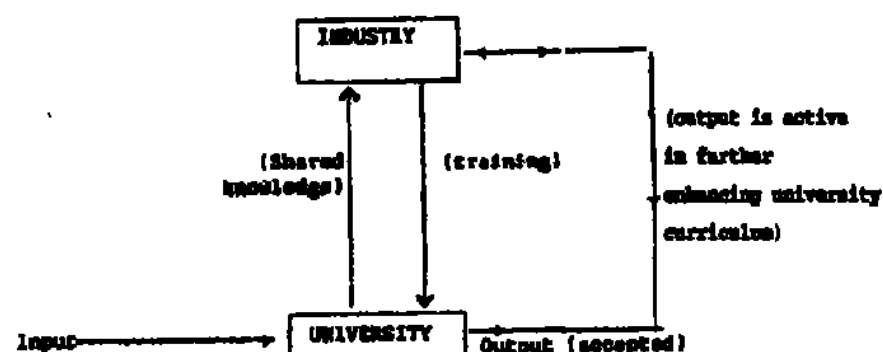


Fig. 2. The envisaged University - Industry linkage systems.

# AGRIUNIFEST '99

## Profile Analysis of Participants

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The Association of Indian Universities revived the tradition of celebrating the Inter University Youth Festivals in 1985 to mark the International Year of Youth. The Agricultural Universities have been taking part in the Youth Festivals organized by the Association of Indian Universities. The Youth Festivals provide a platform for young men and women to exhibit their talents in different extra curricular activities in a high spirit of competition and comraderie. It is also a time-tested way of inculcating the feeling of national integration among the young of the country. During 1998, the Indian Council of Agricultural Sciences, Dharwad got the privilege to host the First All India Agricultural University Youth Festival under the banner AGRUNIFEST '99 at Krishinagar Campus, Dharwad from March 12-16, 1999.

In India, there are 33 Agricultural Universities (including four Deemed Universities), of which 19 universities confirmed their participation but actually only 11 universities participated in the AGRUNIFEST '99. They are —

- 1) Assam Agricultural University, Jorhat (AAU)
- 2) G.B. Pant University of Agriculture & Technology, Pantnagar (GBPUAT)
- 3) Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur (JNKVV)
- 4) Kerala Agricultural University, Thrissur (KAU)
- 5) Mahatma Phule Krishi Vidyapeeth, Rahuri (MPKVP)
- 6) Orissa University of Agriculture and Technology, Bhubaneswar (OUAT)
- 7) Punjab Agricultural University, Ludhiana (PAU)
- 8) Punjab Rao Krishi Vishwavidyalaya, Akola (PRKV)
- 9) Tamil Nadu Agricultural University, Coimbatore (TNAU)

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10) University of Agricultural Sciences, Bangalore (UAS-B)

11) University of Agricultural Sciences, Dharwad (UAS-D)

A total of 244 participants comprising 170 boys, 54 girls and 16 male and 4 female officers participated in AGRUNIFEST '99. Competitions were arranged in 18 events spread over five broad groups such as Music, Dance, Literary, Theatre and Fine Arts. The details are as follows.

### I. Music

a) Light Vocal, b) Patriotic Song, c) Group Song

### II. Dance

a) Folk Dance

### III. Literary

a) Debate, b) Elocution, c) Extempore, d) Quiz

### IV. Theatre

a) Mime, b) Mono-acting, c) Skit, d) One Act Play

### V. Fine Arts

a) On the spot painting, b) Poster making, c) Collage, d) Cartooning, e) Rangoli, f) Clay modelling

The number of boys and girls who represented each agricultural university and those who responded to the questionnaire administered is given in Table No. 1.

The data on personal characteristics of the participants who represented each agricultural university is depicted in Table 2.

The data reveal that 136 boys (80.47%) and 33 girls (19.53%) from 11 agricultural universities responded to the questionnaire.

It may be seen from Table No. 2 that the proportion of girls among the participants was highest in Assam Agricultural University (36.36%) followed by University of Agricultural Sciences, Bangalore (28.27%). However there was no representation of girls in teams from Punjab Agricultural University, Tamil Nadu Agricultural University and Mahatma Phule Krishi Vidyapeeth. In some of the State Agril. Universities nearly 50 per cent of the students are girls. In spite of

this, the representation of girls in the teams was very low. Maybe the girls concentrated more on curricular activities since participation in extra-curricular activities was not given weightage at any point in their future career.

It is clear from the data that 51.48% and 42.80% of the participants fell under the age groups of 19-21 years and 22-25 years, respectively.

When data is analysed universitywise, it reveals that more than 50 per cent of the participants from TNAU, JNKVV, PAU and KAU were in the age group of 22-25 years, whereas more than 50 per cent of the participants from MPKV, UASB, UASD, AAU and GBPUAT were in the age group of 19-21 years. Though in the State Agricultural Universities, more weightage is given to candidates from rural areas in admissions, these candidates will have very little opportunities from extra-curricular activities for their early education period. Hence, they are unable to compete with their urban counterparts in University and competitions during selections to represent the University. On the other hand, the students from the urban areas have more exposure to such extra-curricular activities right from their schooling. Thus their representation is more in the participating teams.

The data reveal that 57.99% of the participants were from urban areas as compared to 42.01% from rural areas.

The proportion of participants from rural areas was more than 50 per cent in the teams from UAS, Bangalore, from UAS, Dharwad and PAU. On the other hand, more than 50 per cent of the participants from JNKVV, OUAT, PRKV and MPKV, KAU, GBPUAT and AAU were from urban areas.

The data on occupation of parents of the participants also provide support to the above trend that majority (57.99%) of the participants' parents were in Govt. service as compared to only 27.22% of parents were actual agriculturists.

Further, analysis of data reveal that parents' occupation of 50% of the participants from PRKV followed by 55.38% from UAS, Bangalore and 43.48% from UASD was agriculture. On the other hand, 65.88% of parents of the participants from KAU were in private service except in PRKV. More than 45% of the parents of the participants were in Govt. service.

Nearly 80% of the participants were studying in various degree programmes in different agricultural universities and 20.12% were graduates. Postgraduate students preferred to spend all their time on their academic pursuits. They also felt that the extra-curricular activities were meant for UG students. Hence, their

representation on the teams was less. The data reveal that 69.23% and 65% of the participants from PAU and TNAU were graduates and were students of Master's degree programmes. Cent per cent of the participants from UASB, PRKV, GBPUAT and MPKV were students of various bachelor's degree programmes followed by 92.86%, 90.91%, 88.24%, 82.35% and 78.26% of participants from OUAT, AAU, JNKVV, KAU, and UASD, respectively.

The data on source of motivation for students to participate in youth festival reveal that 79.29% of the participants were self motivated and 63.09% of participants were encouraged by friends followed by 50.29% and 40.82% by the whole family of the participants and by the teachers, respectively.

Each participant from each agricultural university indicated more than one source of encouragement for their participation in youth festival. It is encouraging to note from the data that all the participants from JNKVV and MPKV were self motivated. Similarly, majority of participants from GBPUAT, TNAU, UASB, PAU, AAU, PRKV, OUAT and KAU were self motivated to take part in youth festivals. Only 43.48% of the participants from UASD were self motivated to take part in youth festivals.

Data on awareness of participants regarding age limit to take part in youth festival indicate that 65.68% and 12.42% of the participants were aware that the exact age to participate in youth festival was either 23 or 25 years.

A close examination of the data indicate that more than 75% of the participants from PAU, MPKV, UASD, AAU, JNKVV, OUAT and PRKV were aware that the exact age limit was 25 years to participate in youth festival. The remaining participants from these agricultural universities felt that 23 years was the age limit to participate in the youth festival.

A close scrutiny of the data in Table 2 brings to light information on the year of participation of individual participant for the first time in any previous youth festival. It is evident from the data that some of the participants in some agricultural universities had taken part in youth festivals as long back as 1985 probably in school days. It is encouraging to note that some of the participants from TNAU, JNKVV and KAU had taken part in youth festival of 1985 followed by participants from PAU in 1986. Whereas participants from OUAT, AAU, PRKV and MPKV had taken part in youth festival from 1991 onwards and participants from rest of the Agricultural Universities participated in Youth Festivals between 1987 to 1993. Their type of result indicates that participants had interest and en-

thusiasm to take part in various events of youth festival to build up patriotism.

Overall participation in previous years in various events listed under five broad groups indicates that participation in Dance, Mime, One act play, Skits, Light vocal music, Patriotic song, Group song, Quiz, Debate and Collage is encouraging as compared to Monoacting, Elocution, Extempore, Spot painting, Cartooning, Rangoli, Poster making and Clay modelling.

An indepth analysis of the data in Table 2 regarding universitywise participation in previous youth festivals indicate that JNKVV participated in only two events viz., One act play and Debate in previous youth festivals as compared to other agricultural universities that participated either in 10 events or all the events listed under five broad groups.

It can be observed from the data on universitywise awards won in previous youth festivals that the UASD (57) ranks first in number of participants who had taken part in previous youth festivals followed by KAU (48), TNAU (43), UASB (41) and PAU (27).

The data in Table 2 reveal that 27 participants from different universities secured medals in various events in previous youth festival and 61 participants obtained certificates of merit for their participation in previous youth festivals.

The data on universitywise distribution of participants who secured distinction reveal that PRKV stood first with 87.50% of participants having secured medals in previous youth festivals followed by 37.50% from MPKVP and 30.77% each from UASB and PAU, respectively.

Again PRKV stood first with 100% of the participants having obtained certificate of merit for their participation in previous youth festivals. The UASB and PAU with 76.92% of the participants securing certificate of merit in previous youth festivals were next followed by KAU (52.94%) and TNAU (50%).

The data regarding distribution of participants from different agricultural universities in various events of AGRIFEST '99 is presented in Table 3. As per the rules of AGRIFEST '99 any one participant could take part in as many events as he/she wished. It is evident from the data in Table 3 that each participant had taken part in at least 3 events of AGRIFEST '99.

192 participants from different agricultural universities participated in various events under Theatre followed by participants in Music events (111), Dance (50), Literary (45) and Fine arts (41). This may be because of daily exposure of youth to Theatre and Music events

on Television. The participation in Folk dance, Literary and Fine arts events was also encouraging.

An indepth analysis of data for universitywise distribution of participants in various events of AGRIFEST '99 highlights that 23 and 25 participants from UASD, GBPUAT had taken part in more than 3 events of AGRIFEST '99 aggregating 51 events. Similarly, participants from AAU in 49 events followed by 20 and 8 participants from TNAU and MPKVP in 48 events, 13 participants each from UASB and PAU had taken part in 34 events, and 17 participants from KAU in 36 events. Similarly, 8 participants from PRKV participated in 22 events of AGRIFEST '99.

On the whole, the AGRIFEST '99 provided a very good opportunity for students from as far as Assam in the East to Maharashtra in the West, Punjab in the North to Kerala in the South to come together, interact with one another and compete in the events with a sense of pride and brotherhood. May such festivals be held regularly so that our youth can understand one another better.

Table 1 : Universitywise Distribution of Participants

S. No.	Name of Agricultural University	Total Participants Represented			Participants Responded
		Boys	Girls	Total	
1.	Assam Agricultural University (AAU), Jorhat	14	04	18	11
2.	GB Pant Univ. of Agriculture & Technology (GBPUAT), Pantnagar	18	07	25	25
3.	Jawaharlal Nehru Krishi Vishwavidyalaya (JNKVV), Jabalpur	16	06	22	17
4.	Kerala Agricultural University (KAU), Thrissur	15	07	22	17
5.	Mahatma Phule Krishi Vidyapeeth (MPKVP), Rahuri	14	02	16	08
6.	Orissa University of Agriculture & Technology (OUAT), Bhubaneswar	10	08	18	14
7.	Punjab Agricultural University (PAU), Ludhiana	24	01	25	13
8.	Punjab Rao Krishi Vishwavidyalaya (PRKV), Akola	10	02	12	08
9.	Tamil Nadu Agricultural University (TNAU), Coimbatore	16	05	21	20
10.	University of Agricultural Sciences, Bangalore (UAS-B)	15	03	18	13
11.	University of Agricultural Sciences, Dharwad (UAS-D)	18	09	27	23
Total		170	54	224	169



**Table —2 : Universitywise Distribution of Participants According to Personal Characters**

Particulars	UAS B'lore (n=13)	UAS Dharwad (n=23)	PAU Ludhiana (n=13)	AAU Jorhat (n=11)	OUAT Bhuba- neswar (n=14)	TNAU Coimba- lore (n=20)	JNKVV Jabalpur (n=17)	PDKV Akola (n=8)	KAU Thrisur (n=17)	GBPUAT Pant- nagar (n=25)	MPKV Rahuri (n=8)	N = 161
1	2	3	4	5	6	7	8	9	10	11	12	1
<b>1. Sex</b>												
Boys	9 (69.23)	17 (73.91)	13 (100.00)	7 (63.64)	10 (71.43)	20 (100.00)	15 (88.24)	6 (75.00)	13 (76.47)	18 (72.00)	8 (100.00)	13 (80.44)
Girls	4 (30.77)	6 (26.09)	-	4 (36.36)	4 (28.57)	-	2 (11.76)	2 (25.00)	4 (23.53)	7 (28.00)	-	3 (19.56)
<b>2. Age</b>												
16 to 18 years	-	-	-	-	4 (28.57)	-	-	-	-	6 (24.00)	-	1 (5.90)
19 to 21 years	9 (69.23)	15 (65.22)	5 (38.46)	7 (63.64)	5 (35.71)	4 (20.00)	6 (35.29)	6 (75.00)	8 (47.06)	15 (60.00)	7 (87.50)	11 (51.43)
22 to 25 years	4 (30.77)	8 (34.78)	8 (61.52)	4 (36.36)	5 (35.71)	16 (80.00)	11 (64.71)	2 (25.00)	9 (52.94)	4 (16.00)	1 (12.50)	11 (42.60)
<b>3. Parent Occupation</b>												
Government Service	6 (46.15)	12 (52.17)	10 (76.92)	9 (81.82)	10 (71.43)	9 (45.00)	8 (47.06)	2 (25.00)	12 (70.59)	14 (56.00)	6 (75.00)	57 (57.50)
Private Service	-	1 (4.35)	-	1 (9.09)	1 (7.14)	3 (15.00)	-	2 (25.00)	1 (5.88)	2 (8.00)	-	6 (6.15)
Business	-	-	-	-	1 (7.14)	3 (15.00)	4 (23.53)	-	1 (5.88)	4 (16.00)	1 (12.50)	8 (8.15)
Agriculture	7 (53.85)	10 (43.48)	3 (23.08)	1 (9.09)	2 (14.29)	5 (25.00)	5 (29.14)	4 (50.00)	3 (17.65)	5 (20.00)	1 (12.50)	27 (27.10)
Others												
<b>4. Background</b>												
Rural	9 (69.23)	13 (56.52)	7 (53.85)	5 (45.45)	3 (21.43)	14 (70.00)	3 (17.65)	2 (25.00)	5 (29.41)	8 (32.00)	2 (25.00)	42 (42.00)
Urban	4 (30.77)	10 (43.84)	6 (46.15)	6 (54.55)	11 (78.57)	6 (30.00)	14 (82.35)	6 (75.00)	12 (70.59)	17 (68.00)	6 (75.00)	57 (57.00)
<b>5. Degree in which Participants Studying</b>												
Undergraduate	13 (100.00)	18 (78.26)	4 (30.77)	10 (90.91)	13 (92.86)	7 (35.00)	15 (88.26)	8 (100.00)	14 (82.35)	25 (100.00)	8 (100.00)	79 (79.00)
Postgraduate	-	5 (21.74)	9 (69.23)	1 (9.09)	1 (7.04)	13 (65.00)	2 (11.76)	-	3 (11.65)	-	-	20 (20.00)
<b>6. Sources of Encouragement</b>												
Mother	8 (61.54)	6 (26.09)	5 (38.46)	2 (18.18)	7 (50.00)	7 (35.00)	4 (23.53)	5 (62.50)	6 (35.29)	4 (16.00)	6 (75.00)	35 (35.00)
Father	6 (49.15)	5 (21.74)	5 (38.46)	3 (27.27)	6 (42.86)	9 (45.00)	3 (17.65)	3 (37.50)	8 (47.06)	6 (24.00)	5 (62.50)	34 (34.00)
Brother	6 (46.15)	3 (13.04)	2 (15.38)	1 (9.09)	5 (35.71)	6 (30.00)	2 (11.76)	3 (37.50)	1 (5.88)	1 (4.00)	2 (25.00)	18 (18.00)
Sister	8 (61.54)	3 (13.04)	4 (30.77)	-	3 (21.43)	5 (25.00)	2 (11.76)	1 (12.50)	4 (23.53)	2 (8.00)	1 (12.50)	18 (18.00)
Whole Family	10 (76.92)	9 (39.13)	3 (23.08)	5 (45.45)	10 (71.43)	10 (50.00)	9 (52.94)	2 (25.00)	10 (58.82)	13 (52.00)	4 (50.00)	61 (61.00)
Friends	10 (76.92)	15 (65.22)	8 (61.54)	2 (18.18)	13 (92.86)	18 (90.00)	9 (52.94)	7 (87.50)	13 (76.47)	12 (48.00)	3 (37.50)	61 (61.00)
Teachers	8 (61.54)	13 (56.52)	4 (30.77)	2 (18.18)	11 (78.57)	3 (15.00)	7 (41.18)	6 (75.00)	12 (70.59)	-	3 (37.50)	41 (41.00)
Self Motivation	11 (84.62)	10 (43.48)	11 (84.62)	9 (81.82)	10 (71.43)	18 (90.00)	17 (100.00)	6 (75.00)	11 (64.70)	23 (92.00)	8 (100.00)	77 (77.00)



7. Awareness-Age Limit  
For Participation

23 years	2	6	1	1	2	2	2	2	-	2	1	21
	(15.38)	(28.08)	(7.69)	(9.09)	(14.28)	(10.00)	(11.76)	(25.00)		(8.00)	(12.50)	(12.42)
25 years	11	12	12	9	11	8	14	6	7	14	7	111
	(84.62)	(52.17)	(92.31)	(81.82)	(78.57)	(40.00)	(82.35)	(75.00)	(41.18)	(56.00)	(87.50)	(65.68)
28 years	-	5	-	1	1	10	1	-	6	8	-	32
		(21.74)		(9.09)	(7.14)	(50.00)	(5.88)		(35.29)	(32.00)		(18.93)
30 years	-	-	-	-	-	-	-	-	4	-	-	4
									(23.53)			(2.36)
32 years	-	-	-	-	-	-	-	-	-	1	-	1
										(4.00)		(0.59)

8. Year of 1st Participa-  
tion in youth  
festival

1988	1989	1986	1993	1991	1985	1985	1996	1985	1988	1993	(20.12)
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9. Participation in  
events of previous  
youth Festivals

Dance — Folk	7	3	5	-	2	-	-	-	1	2	2	22
	(53.85)	(13.04)	(38.46)		(14.28)				(5.88)	(8.00)	(25.00)	(13.01)
Theatre — Mime	5	7	3	1	1	8	-	2	5	2	1	35
	(38.46)	(30.43)	(23.08)	(9.09)	(7.14)	(40.00)		(25.00)	(29.41)	(8.00)	(12.50)	(20.71)
— One Act Play	6	7	3	-	2	8	1	8	6	2	2	45
	(46.15)	(30.43)	(23.08)		(14.28)	(40.00)	(5.88)	(100.00)	(35.29)	(8.00)	(25.00)	(26.62)
— Skits	4	11	3	-	2	8	-	3	5	3	1	39
	(30.77)	(47.83)	(23.08)		(14.28)	(40.00)		(37.50)	(29.41)	(12.00)	(12.50)	(23.07)
— Mono Acting	1	1	-	-	-	2	-	-	2	1	1	8
	(7.69)	(4.35)				(10.00)			(11.76)	(4.00)	(12.50)	(4.73)
— Others						1			1	2		2
						(5.00)			(5.88)	(8.00)		(1.18)
Music — Light Vocal	2	-	1	1	1	1	-	-	3	1	-	10
	(15.38)		(7.69)	(9.09)	(7.14)	(5.00)			(17.65)	(4.00)		(5.91)
— Patriotic Song	2	4	3	2	-	1	-	-	2	2	1	17
	(15.38)	(17.39)	(23.08)	(18.18)		(5.00)			(11.76)	(8.00)	(12.50)	(10.53)
— Group Song	4	5	3	1	2	1	-	-	3	2	2	23
	(30.77)	(21.74)	(23.08)	(9.09)	(14.28)	(5.00)			(17.65)	(8.00)	(25.00)	(13.60)
— Others	-	-	1	1	1	1	-	-	1	-	-	5
			(7.69)	(9.09)	(7.14)	(5.00)			(5.88)			(2.95)
Literary												
— Quiz	4	3	1	1	1	3	-	-	2	2	-	17
	(30.77)	(13.04)	(7.69)	(9.09)	(7.14)	(15.00)			(11.76)	(8.00)		(10.05)
— Debate	1	1	1	1	2	2	1	-	1	1	-	11
	(7.69)	(4.35)	(7.69)	(9.09)	(14.28)	(10.00)	(5.88)		(5.88)	(4.00)		(6.50)
— Elocution	2	1	-	1	-	1	-	-	3	1	-	9
	(15.38)	(4.35)		(9.09)		(5.00)			(17.65)	(4.00)		(5.32)
— Extempore	1	1	1	1	-	1	-	-	2	1	-	7
		(4.35)	(7.69)	(9.09)		(5.00)			(11.76)	(4.00)		(4.14)
— Others	-	-	-	-	-	1	-	-	2	-	-	2
						(5.00)			(11.76)			(1.18)
Fine Arts												
— Spot Painting	1	3	-	-	-	-	-	1	1	2	-	8
	(7.69)	(13.04)						(12.50)	(5.88)	(8.00)		(4.73)
— Collage	1	3	1	-	-	2	-	1	2	-	1	11
	(7.69)	(13.04)	(7.69)			(10.00)		(12.50)	(11.76)		(12.50)	(6.50)
— Cartooning	1	2	-	1	-	-	-	1	2	-	-	7
	(7.69)	(8.70)		(9.09)				(12.50)	(11.76)			(4.14)
— Rangoli	-	1	-	-	-	1	-	1	-	-	-	3
		(4.35)				(5.00)		(12.50)				(1.77)
— Poster Making	-	4	1	-	-	-	-	1	1	-	1	8
		(17.39)	(7.69)					(12.50)	(5.88)		(12.50)	(4.73)
— Clay Modelling	-	-	1	-	-	1	-	1	3	-	-	6
			(7.69)			(5.00)		(12.50)	(17.65)			(3.55)
10. Certificates/Medals Obtained	41	57	27	11	13	43	2	19	48	22	12	
— Certificate	10	3	10	-	4	10	4	8	9	-	3	61
	(76.92)	(13.04)	(76.92)		(28.57)	(50.00)	(23.53)	(100.00)	(52.94)		(31.50)	(36.09)
— Medals	4	1	4	-	1	4	2	7	1	-	3	27
	(30.77)	(4.35)	(30.77)		(7.14)	(20.00)	(11.76)	(87.50)	(5.88)		(37.50)	(15.33)

(Contd. on page 9)

# The Mark of Centenaries in 1999

Sadanand Patra\*

The commemoration of an anniversary, a silver jubilee or a centenary of an event takes place in its due periodical interval of time and therefore, while most of the years of a calendar can witness a few anniversaries and perhaps a silver jubilee or a golden jubilee, only some years of a calendar can boast of observing the centenary celebration of any great event during its course. However the case of the present year 1999 is a remarkable one with a difference, for it holds quite a few centenaries of some great national events that shaped India's history and society in general and those of Punjab in particular. The remembrance of these national events has a great sentimental value to everyone, for it enlightens one on the problems of the past and kindles one's imagination for the future, lest one should forget both and may learn them again in a harder way.

The year 1999 marks the 200th anniversary of the birth of freedom movement in India which was punctuated with the execution of a great freedom fighter and one of the earliest martyrs of freedom struggle from South India, Veerapandia Kottabomman (1760-1799). The ruler of Panchalankuruchi since 1790, he organized a rebellion with Poligars against British occupation of Indian territory. As a result, the British force under Major John Bannerman set to quell the resistance, captured Kottabomman and his friends from the jungle of Kalapore near Pudukottai and after a short trial, sentenced him to capital punishment on October 16, 1799. However, the light of his spirit continued to spread for the next one hundred and fifty years in India till British left this land in 1947.

There is yet another bicentennial event of our history this year. The contemporary of Kottabomman in the Carnatic region was Tipu Sultan who also raised a tough challenge to the British expansion in South. The result was the outbreak of a great war — the fourth Mysore war in May 1799 — where Tipu died fighting at the battle of Seringapatam. India lost yet another brave son in defence of her land. For the British it was one of the greatest victory perhaps after Plassy and Buxar, and by this they become a strong power in India.

This year again marks the 2nd centenary anniversary of another great event — the rise of Sikh Power with Maharaja Ranjit Singh appearing on the political

scene of India at the turn of the century. Born in 1780 Ranjit Singh became the Governor of Punjab in 1799 at a young age of 19 and since then he carried out a career of conquest for the next 40 years till his death in 1839. As a great warrior and statesman he subdued dozens of chieftains in western India, established a huge kingdom over Punjab, Kashmir and Peshawar and earned the title "the Lion of Punjab". The British were so much concerned about him that they maintained perpetual amity with him throughout the period of his reign.

One of the most spectacular centenary of this year was the tercentenary celebration of the advent of Khalsa Panth, which was held with great solemnity, pomp and ceremony at Anandpur Sahib from 8th to 14th April. Nearly 80 lakh Sikhs from many parts of the world participated in the celebration. The establishment of the Khalsa Panth was one of the greatest events of India, for, if there were no Khalsa, the history and geography of India would have been totally different from what it is today. The Afghans would have conquered more of India then and perhaps the Talibans would have ruled from Delhi now. However all this and much more could not happen due to the foundation of Khalsa Order by Guru Gobind Singh 300 years ago.

It was on March 30, 1699 a harvest festival called Baisakhi Day, the Guru summoned a big assembly of the Sikhs at Anandpur and initiated them into Khalsa doctrine. Some 40 thousand Sikhs participated in that congregation where they were given a distinct identity by adopting the so called 5Ks — *Kesh* (hair), *Kanga* (a comb), *Kada* (a bracelet), *Kripan* (dagger) and *Kachha* (short trouser). He also selected 5 persons later known as *Panj Piaras* (Five beloved ones) to convey the message of oneness of humanity, honesty, humility etc and to uphold and defend the faith.

This year also holds the quincenary mark of the foundation of Sikhism in India. It was exactly 500 years ago in 1499 that Nanak, after years of search for Truth, got enlightened at the age of thirty at Sultanpur near the bank of river Beas, became the Saint and the Guru and began teaching a new philosophy that dominated the spiritual life, social value, political condition and historical events of India ever since. Thus this 500th anniversary of that occasion merits as much attention of observation as that of the 5th centenary celebration of the birth of Guru Nanak.

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The mark of the sesquicentennial anniversary of another historic event of India also occurs in 1999. Exactly 150 years ago in 1849 were fought two important battles — as part of second Anglo Sikh war where British fought a great war for the last time in India and eliminated the last bravest and steadiest power of resistance to them in India. With Lord Dalhousie's policy of annexation, British advance to Punjab met the Sikhs at the battle of Chalianwalla on January 13th. After a fight of two hours the British lost heavily with three thousand dead or wounded and they withdrew from the battle field. However, exactly after 40 days the British renewed the attack against the Sikhs at the battle of Gujarat on February 21st and this time they inflicted a crushing defeat on the Sikhs. In the ensuing treaty of Amritsar, the British became the owner of another 15 thousand square miles of territory with boundaries beyond river Indus.

This year is also considered as the centenary year of a phenomenon called 'the advent of New India/ Modern India'. With the appointment of Lord Curzon as the Governor General of India in 1899, there were radical reforms in policies and all round developments in civil administration, local self government, military recruitment, financial administration, flood relief, irrigation, agriculture, forests, roadways, railways, factory legislation, education, public health, police military reorganization, as well as in social and religious affairs. Modernity began to touch every aspect of Indian life which gradually grew and remained as British legacy in India. Lord Curzon as an intelligent, efficient and hard working viceroy, dawned a new face in India, for which he can be compared with only Lord Dalhousie as one of the greatest and most influential Governor General of India. □

(Contd. on page 9)

**Table 3 : Universitywise Distribution of Participants in Various Events of AGRUNIFEST 1999**

Events	UAS B'lore (n=13)	UAS Dharwad (n=23)	PAU Ludhiana (n=13)	AAU Jorhat (n=11)	OLAT Bhuba- neswar (n=14)	TNAU Coimba- lore (n=20)	JNKVV Jabalpur (n=17)	PDKV Akola (n=8)	KAU Thrissur (n=17)	GBPUAT Pant- nagar (n=25)	MPKV Rahuri (n=8)	N = 169
1	2	3	4	5	6	7	8	9	10	11	12	13
<b>Dance — Folk dance</b>	5 (38.46)	7 (30.43)	6 (46.15)	8 (72.73)	4 (28.57)	-	7 (41.18)	-	-	5 (20.00)	8 (100.00)	50 (29.58)
<b>Theatre — Mime</b>	5 (38.46)	6 (26.09)	5 (38.46)	6 (54.55)	1 (7.14)	13 (65.00)	5 (29.41)	6 (75.00)	5 (29.41)	7 (28.00)	7 (87.50)	66 (39.05)
— One Act Play	8 (61.54)	9 (39.13)	4 (30.77)	7 (63.64)	-	14 (70.00)	5 (29.41)	7 (87.50)	6 (35.29)	1 (4.00)	-	61 (36.09)
— Skits	4 (30.77)	7 (30.43)	3 (23.08)	7 (63.64)	6 (42.86)	9 (45.00)	-	6 (75.00)	7 (41.18)	5 (20.00)	3 (37.50)	57 (33.73)
— Mono Acting	-	1 (4.35)	-	1 (9.09)	1 (7.14)	1 (5.00)	1 (5.88)	-	1 (5.88)	1 (4.00)	1 (12.50)	8 (4.73)
<b>Music — Light Vocal</b>	-	3 (13.04)	1 (7.69)	2 (18.18)	1 (7.14)	-	1 (5.88)	-	3 (17.65)	1 (4.00)	3 (37.50)	15 (8.88)
— Patriotic Song	3 (23.08)	6 (26.09)	2 (15.38)	3 (27.27)	4 (28.57)	-	-	-	7 (41.18)	8 (32.00)	7 (87.50)	40 (23.66)
— Group Song	4 (30.77)	5 (21.74)	2 (15.38)	8 (72.73)	4 (28.57)	-	7 (41.18)	-	7 (41.18)	11 (44.00)	8 (100.00)	56 (33.13)
<b>Literary — Quiz</b>	3 (23.08)	-	3 (23.08)	1 (9.09)	-	2 (10.00)	1 (5.88)	-	2 (11.76)	2 (8.00)	1 (12.50)	15 (8.88)
— Debate	-	1 (4.35)	1 (7.69)	1 (9.09)	1 (7.14)	2 (10.00)	2 (11.76)	-	2 (11.76)	2 (8.00)	1 (12.50)	13 (7.69)
— Elocution	1 (7.69)	-	1 (7.69)	1 (9.09)	1 (7.14)	2 (10.00)	1 (5.88)	-	1 (5.88)	1 (4.00)	1 (12.50)	10 (5.92)
— Extempore	-	-	1 (7.69)	1 (9.09)	-	1 (5.00)	1 (5.88)	-	1 (5.88)	1 (4.00)	1 (12.50)	7 (4.14)
<b>Fine Arts — Spot Painting</b>	1 (7.69)	1 (4.35)	1 (7.69)	-	1 (7.14)	1 (5.00)	-	1 (12.50)	-	1 (4.00)	1 (12.50)	8 (4.73)
— Collage	-	1 (4.35)	1 (7.69)	-	1 (7.14)	1 (5.00)	-	-	1 (5.88)	1 (4.00)	1 (12.50)	7 (4.14)
— Poster Making	-	1 (4.35)	-	-	1 (7.14)	-	-	1 (12.50)	1 (5.88)	1 (4.00)	1 (12.50)	6 (3.55)
— Cartooning	-	1 (4.35)	-	-	-	1 (5.00)	-	-	-	1 (4.00)	1 (12.50)	4 (2.36)
— Rangoli	-	1 (4.35)	1 (7.69)	-	1 (7.14)	1 (5.00)	-	-	-	1 (4.00)	1 (12.50)	6 (3.55)
— Clay Modelling	-	1 (4.35)	1 (7.69)	1 (9.09)	1 (7.14)	1 (5.00)	-	1 (12.50)	2 (11.76)	1 (4.00)	1 (12.50)	10 (5.92)
<b>Total</b>	<b>34</b>	<b>51</b>	<b>34</b>	<b>49</b>	<b>28</b>	<b>48</b>	<b>31</b>	<b>22</b>	<b>36</b>	<b>51</b>	<b>48</b>	<b>41</b>

# Declining Standard of Higher Education

## A University Teacher's View

Sukhdev Singh\*

S.K. Mehta\*\*

Higher education in any society is of vital importance in the whole education system (Desai : 1988, Arora : 1998, Mohanty : 1995, Singh : 1985, Kapur : 1977, Hommadi : 1985, Sinha : 1982, Joshi : 1980, UNESCO : 1965). If good primary education is like the strong stem of any tree of society, higher education is like the fruits of that tree which are reaped in the form of socio-economic, industrial and technological development ultimately leading any nation towards better quality of life. In India higher education has been an integral part of education system since time immemorial, notwithstanding the different nature of higher education in the past. In the post-independence era central and state governments of India have been trying to strengthen the process of higher education, largely on the lines of western countries with a view to build a new and progressive social order based on social justice. It was further realised that reform of education could no longer be postponed because progress in every sector of national life — in industry, agriculture, commerce, communication and health, and the general standard of living depended largely on the quality and adequacy of higher education provided to the people. In the last five decades, number of universities, colleges and other institutions of higher education have been established. According to the report of the Ministry of Human Resource Development (1997) there are 226 universities and 6569 Arts and Sciences Colleges and 1354 professional colleges in which around 55,32,998 students are getting education of various types. In Punjab, a tiny state of India, there are 4 universities, 177 Arts and Sciences Colleges and 33 professional colleges in which 1,57,126 students are getting higher education out of which 77141 are boys and 82985 are girls.

In the ladder of higher education university education has its own importance and place in almost all the societies of the world. Pandit Jawaharlal Nehru once said "A university stands for humanism, for tolerance, for reason, for progress, for the adventure

of ideas and for the search for truth. It stands for the onward march of the human race towards ever high objectives" (Venkatachaliah : 1999). By now, India has sufficient number of universities engaged in various educational pursuits. In spite of this phenomenal growth in the field of higher education, for quite some time now a general feeling is growing that the standard of higher education is declining (Deshpande : 1999, Srivastava : 1999, Bhandari : 1999, Mohanty : 1995, Faruqi et. al : 1994, Desai et. al : 1987, Hommadi : 1985). Venkatachaliah observes that unfortunately Indian Universities, in the quality of their research and teaching programmes, have not realised and achieved their own potential. The quality of intellectual life is not uniformly bright. There is an increasing air of indiscipline and irreverence leading to an increasing sense of disenchantment with the universities and their ability to contribute to the development of science and technology. With a view to probe the facts regarding the declining standard of university education, this study was undertaken with the following specific objectives :

- (I) Is the standard of university education declining?
- (II) To bring forth the factors/reasons of declining standard of university education; and
- (III) To offer suitable suggestions for improving the standard of university education.

### Methodology

The study was conducted in Punjab Agricultural University (PAU), Ludhiana, which is one of the premier agricultural universities of India. Data were collected from all the five constituent colleges at the main campus i.e. College of Agriculture (COA), College of Basic Sciences and Humanities (COBS & H), College of Agricultural Engineering (COAE), College of Veterinary Sciences (COVS) and College of Home Science (COHS). A semi-structured questionnaire containing the basic questions of the investigation was supplied to 15 teacher-respondents of each of the five colleges i.e. a total sample of 75 teachers spread over the whole university. Teachers of all ranks i.e. Professors, Associate Professors, and Assistant Professors were given equal representation in the

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study. Adequate time of one month was given to the respondents to complete the questionnaire. Six factors i.e. economic, social, ethical, psychological, political and miscellaneous were hypothesised as the basic factors for the declining standard of higher education. The teacher-respondents were asked to rank these six factors in accordance with their importance towards falling standard of higher education. The coefficient of concordance (W) given by Kendall (1939) was applied to arrive at the composite ranks assigned to these factors (Conover, 1971). Kendall's coefficient of concordance (W) is defined as :

$$W = 12 S / [K^2 n(n^2-1)]$$

where K = number of teacher-respondents

n = number of important factors causing decline in standard of higher education.

$$\text{and } S = \sum_{j=1}^n (R_j - \bar{R})^2$$

$R_j$  being the total of ranks assigned to the  $j^{\text{th}}$  factor by each of the K respondents. The value of W always lies between 0 and 1, and it is never negative. The significance of W is tested under the null and alternative hypotheses,  $H_0$  and  $H_1$  :

$H_0$  : K sets of rankings are independent (respondents differ amongst each other)

$H_1$  : K sets of rankings are dependent (respondents are in agreement) by applying  $\chi^2$ -test, where  $\chi^2$  with (n-1) d.f is computed by the formula

$$\chi^2 = K (n-1) W$$

If the calculated value of  $\chi^2$  is less than the table value of  $\chi^2$  with (n-1) degrees of freedom at desired level of significance, retain the null hypothesis  $H_0$  of the disagreement among the teacher-respondents, otherwise reject the null hypothesis  $H_0$  and accept the alternative hypothesis.  $H_1$  to be true leading to the conclusion that the respondents are in agreement. In case W turns out to be significant by  $\chi^2$ -test implying thereby that the respondents were in agreement, there is a justification to use the average (or total) of these ranks as the composite rank of the factor being considered. Thus to judge the relative importance of a factor, the criterion used was that the lower the value of total  $R_j$  for a factor, the more important was the factor and vice-versa.

## Results and Discussion

### a. Pattern of response of the respondents

The extent of response received from the teacher-respondents is exhibited in Table 1. Out of total 75

questionnaire schedules supplied to teachers of various colleges, 55 (73.3%) teachers of different ranks responded to the survey with varied level of interest shown to the researcher. College-wise breakup of the response indicates that all the teachers (100%) of Veterinary College responded to the survey and showed enough interest and some of them expressed curiosity to know the findings of the research venture. Teachers from College of Agriculture and College of Basic Sciences also gave an encouraging response as 86.7% and 80.0% of them respectively responded to the research effort. However, teachers of College of Home Science and College of Agri-Engineering showed lesser interest in the study as only 60 and 40 per cent teachers of these colleges respectively returned the filled questionnaires. In spite of the repeated visits by the investigator some of the teachers did not entertain the researchers. While some of such teachers pleaded their inability to fill the questionnaire due to paucity of time available with them, a few other were apprehensive for reasons best known to them.

### b. Is the standard of university education declining?

Was the standard of education really declining? This was the first question posed to the respondents. To this query all (100%) of the respondents said "yes" which is indicative of the fact that the standard of university education is really going down. Some of the senior teachers, in their comments on this very phenomenon, recalled the old days which they termed as 'golden days' when atmosphere of research and teaching prevailed all around the campus. Many of the respondents cited examples of the pioneer teachers, in different disciplines, who by their sheer hard work and dedication to the profession, put the name of PAU amongst the institutions of the world reckoned with. Taking a simplistic view, all the teacher-respondents held that the standard of university education has been declining due to various factors as revealed by in-depth analyses of the data which follows.

### c. Relative importance of factors responsible for declining standard of university education

A perusal of Table 2 reveals that about half (47.2%) of the respondents-teachers considered erosion of ethical values among the teachers, students and in the society as prime factor, while about one-third (34.6%) considered the economic constraints of the teachers as foremost causative factor responsible for deterioration of standard of education. About a fifth of the respondent-teachers viewed political interference as foremost factor while 16.3% and 5.4%

of them gave 1st rank to miscellaneous and social factors respectively as main factors for declining standard of university education. None of the respondent-teachers gave 1st rank to psychological reasons. Economic factor was awarded the second rank by larger percentage i.e. 25.5% followed by 23.6% and 18.2% awarding second rank to ethical and social factors. Kendall's coefficient of concordance  $W$  worked out to be 0.23 which indicated the degree of concordance between the 55 teacher respondents with regard to the six factors identified to be the main causes of decline in the standard of university education. The significance of the coefficient of concordance was tested by applying  $\chi^2$ -test. The value of  $\chi^2$  (with 5 d.f) worked out to be 63.25 which was significant at 1% level of significance. The significance was indicative of the fact that the respondents were in agreement and hence composite ranks can be assigned to the six causative factors according to the magnitude of  $R_j$ . As exhibited in the last column of Table 2, it was concluded that the ranking of six factors were : Ethical (1st), Economic (2nd), Social (3rd), Political (4th), Psychological (5th) and Miscellaneous (6th). On the whole, the results of the study indicate that ethical, economic and social factors are the three main factors responsible for declining standard of education while political and psychological factors were next in importance and miscellaneous considerations were the least important.

*d. Factor-wise analysis of declining standard of education*

*i. Economic Factor*

The thrust of the present study has been to bring forth the factor/reasons responsible for deteriorating standard of the university education and data in this regard are presented in Table 3 which show the factorwise analysis. Data indicate that under the economic factor, the top ranking causes are less salary, inflation in consumable commodities, and expensive education of the children in that order. Many of the respondent-teachers supported their ideas with several examples. Regarding less salary they contended that in spite of having highest qualification (Ph.D.) the salary is far less than the people working in private and public sectors with simple graduation and post-graduation. Value of the money, they opined, is going down day by day and the dearness allowance given from time to time was far less to compensate the growing financial hardships. Some of the senior teachers compared the value of their present emoluments with those two decades back. Besides, the education of children particularly school

education has grown so costly that a single-hand earner teacher hesitates to send his/her children in the public schools. Exorbitant medical expenses, improper/meagre living accommodation, that also on very high rents, in the city like Ludhiana were the other reasons brought out by the respondents which affect standard of the teaching and research in the university. Some other reasons which undermine the quality of education were less facilities to teachers, engagement of some teachers in secondary occupations, impact of materialism on life style, costly books and journals beyond the reach of teacher's budget etc. As per Kendall's coefficient of concordance the importance of economic reasons from top to bottom came out in the order of ranks presented in the table. These findings are corroborated by some other scholars like Amrik Singh (1985). While commenting upon the low quality of higher education in his book he observed that the second most important reason for declining standard of education is low economic status of teacher. Emoluments are so low and niggard and social prestige so unattractive that teaching has seldom attracted the more talented men and women.

*ii. Social Factor*

Part B of Table 3 depicts the social factor which recede the standard of university education. Data are indicative of the fact that nepotism (1st), corruption (2nd) and regionalism (3rd), are the top ranking social reasons which plague the university education. While filling the questionnaires, many of the respondents have attributed these three reasons as the root cause of declining standard of education. Due to corrupt and malafide practices undeserving persons, who are concerned only with earnings and having least academic aptitudes are occupying positions in university departments leaving the much more deserving candidates in suffering. In this process the mediocrity is thriving in different disciplines. Maintenance of social status by showing hospitality, following custom, traditions and rituals, missing sense of pride as a teacher, were other important social reasons which affect the standard of university education. Increasing tendency of consumerism and hedonism among the teachers due to societal level effects (materialism) also affect the quality of education. Statistical test placed nepotism (1st), corruption (2nd), regionalism (3rd), maintenance of social status (4th), and others on 5th place amongst the social reasons.

*iii. Ethical*

Interestingly ethical factor turned out to be the foremost in causing decline in the standard of university academics. Amongst all the six factors (Ta-



ble 2) it ranks on the top. Erosion of ethical values and moral standard among the teachers, students and society as a whole, has severely undermined the standard of university education. Among the sub-factors, non-recognition of talent and entry of non-serious students in the university and lukewarm involvement of teachers in academics were the top ranking ethical reasons. About half of the respondents have given lot of illustrations through their written comments on the questionnaire which indicate that university education has not been taken with reverence. Idealism is a value of the past. Work-culture in research and teaching has been damaged beyond repair. Inability to instil the professional outlook among the teachers was another crucial factor. Teacher-taught relationship has not remained pious. In some cases teachers got threats from students for not awarding them higher scores. Furthermore, professional interaction has been replaced by personal and of peripheral interest and critical group discussions are missing. The unionistic approach by students and teachers at the cost of professional upliftment, was another major factor deteriorating the standard of university education. Other unethical practices were : influencing the teacher for fetching high grades through base means, declining reading habits among the students due to heavy dependence on 'class notes', less frequency of teacher to the library etc. Besides, squeezing punctuality, dedication to academics on the part of students and teachers, increasing individualism, and loss of missionary zeal have also been found to be responsible for receding educational standards. Statistical analysis ranked the non-recognition of talent as the 1st sub social cause, followed by non-serious students, lack of involvement in study, lack of punctuality, free will and others.

#### *iv. Psychological*

Among the psychological factors monotony and routine of academic works were found to be the major causes of lethargy and boredom which erode the enthusiasm of teachers and lessen their interest in academic works. Personal tensions also turned out to be an important cause which deflates the academic interest. Although none of the teachers has given 1st rank to psychological reasons yet a few of them have narrated few examples where conflict within the family, within the staff and with authority gave rise to the evasive attitude towards work and over the time some teachers turned more cynical. Lack of self-evaluation, lack of aptitude towards profession, over dominance by non-teaching staff and their attitude to please the bosses only generated lot of tension i

the junior teachers which ultimately made the teacher more remorse in academics. Under psychological factors Kendall's coefficient of concordance placed the monotony to work on the top followed by personal tensions and others.

#### *v. Political*

Ingress of politics in the academic institutions, particularly during the appointments and promotions to higher posts has severely been undermining the standard of university education beside eroding the autonomy of the university. Many of the respondents bemoaned through their comments that increasing trend of favouritism has been ruining the whole education system. Merit has been consistently ignored during selection. Comments of some of the teachers led to the conclusion that this happened due to indifference of intelligentsia towards politics and lack of consistent educational policy at the centre and state level. Mohanty (1995) in his study concludes that politicization of higher education has posed a serious threat to the quality of higher education. The Gajendragadker committee was very much critical about the politicization of the system and curb on autonomy of the higher education. Statistically, political factors got fourth rank importance as presented in Table 2.

#### *vi. Miscellaneous*

Under the miscellaneous factors, internal examination system, non accountability of the teachers and inbreeding turned out to be the top ranking factors which cut-sized the standard of university education. Many of the respondents reported several instances where they narrated that internal examination system is quite easy for the teacher but the students suffer in this easy going process. Besides, instead of focusing on main discipline the students are kept busy in allied subjects and assignments which are much less beneficial to the students later on. Employment of the product (students) in their own institution has also been found responsible for this decline. Some of the teachers opined that even if it is necessary, the candidates must be given some exposure to the other institutions. Lack of laboratory equipment (even the very basic requirement), poor library facility, lack of professionalism, non-availability of latest techniques in different disciplines, general deterioration in the society, socialization of the children in corrupt environment, less representation to young in administration are some of the other reasons which have been affecting the standard of university education.



## Conclusions

The study aimed at highlighting the factors which undermine the quality of university education. The Composite analysis of the data gathered from the 55 teachers of various ranks of Punjab Agricultural University, led to the conclusion that the standard of university education is declining. Erosion of ethical values and moral standards among the teachers, students and society as whole turned out to be the prime causes for declining standard of university education. Non-recognition of talent, receding professionalism, entry of non-serious students in the institutions, unionism at different levels, declining reading habits and following the backdoor ways to get good scores by the students turned out to be the main causative factors for declining the standard of higher education. Second most important factor which undermined the quality of education has been economic factor under which less emoluments, expensive children education, inflation, and improper accommodation were the reasons/causes which ultimately deflated the teacher's interest in providing quality education. Social factor turned out to be the third major factor responsible for squeezing the standard of university education. Intensified nepotism and corruption, regionalism, and entry of mediocres in teaching turned to be major features of social factor. Psychological, political and other miscellaneous factors were placed the 4th, 5th and 6th in the overall ranking of factors. Personal tensions, increasing conflicts in the families and with colleagues, ingress of politics in academics at the time of appointments and promotions, no say of intelligentia in politics, internal examination system, inbreeding, lack of basic research facilities in the institutions, growing indiscipline and decreasing reverence of academic institutions turned out to be the other important reasons undermining the standard of university education.

## Suggestions

After going through the whole analysis and reasons given by the respondent-teachers, some suggestions are made which may go a long way in improving the standard of higher education :

1. Talent and merit must be given due recognition and weightage at the time of appointments in the institutions discarding the 'sons of soil approach'. Political interference should be minimized in the academics.
2. Teachers doing good work be given some special incentives and encouragement to foster the work culture in the institutions.
3. Product of an institution should not be absorbed in the same institution. In case it is absolutely necessary on account of sheer merit, sufficient exposure should be given to the selected candidates in outside institutions.
4. Economic lot of the teachers should be improved by providing better pay-scale, on campus residences, house building loans at nominal rates of interest, subsidised travel and medical facilities.
5. Newer dignified modes of judging the teacher's accountability in the system need to be developed. Their longer presence in the department may certainly motivate the younger ones for more hard work.
6. Methods of teaching should be continuously updated by the teachers to make the lectures effective. Use of audio-visual aids, practical demonstrations, field-trips and other innovative teaching techniques can go a long way in improving the standard of education. Therefore, better physical facilities i.e. latest equipments, computers, books, journals and other helping material should be adequately provided.
7. External examinations must form an essential component of the student's evaluation.
8. Policy of higher education must lay stress on quality. Unplanned and mushrooming growth of educational institutions should be stopped.

*Note :* Since, internal examination system prevails in PAU, the findings may vary to a certain extent as compared to other universities.

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**Table 1 : Distribution of number of respondents contacted and responses received**

Name of the College	Category-wise number of schedules supplied and responses received							
	Professor		Associate Professor		Assistant Professor		Overall	
	No. of teachers contacted	No. of responses received	No. of teachers contacted	No. of responses received	No. of teachers contacted	No. of responses received	No. of teachers contacted	No. of responses received
College of Agriculture	5	4	5	4	5	5	15	13(86.7)
College of Veterinary Scs.	5	5	5	5	5	5	15	15(100.)
College of Home Science	5	—	5	4	5	5	15	09(60.0)
College of Basic Sciences & Humanities	5	5	5	2	5	5	15	12(80.0)
College of Agricultural Engineering	5	—	5	1	5	5	15	06(40.0)
Total	25	14	25	16	25	25	75	55(73.3)

Figures within parentheses indicate per cent of responses received

**Table 2 : Ranking of factors causing decline in standard of university education by respondent-teachers**

Factor j (n = 6)	Factors	Number of teachers assigning ranks 1st to 6th						Total No. of teachers assigning ranks (K = 55)	Total of ranks R <sub>j</sub>	Ranking of factors according to value of R <sub>j</sub>
		1st	2nd	3rd	4th	5th	6th			
1.	Economic	19(34.6)	14(25.4)	12(21.8)	5(9.1)	3(5.4)	2(3.6)	55(100.0)	130	II
2.	Social	3(5.4)	10(18.2)	25(45.5)	7(12.7)	8(14.6)	2(3.6)	55(100.0)	178	III
3.	Ethical	26(47.2)	13(23.6)	8(14.6)	4(7.3)	4(7.3)	—	55(100.0)	112	I
4.	Psychological	—	8(14.6)	9(16.3)	24(43.6)	6(10.9)	8(14.6)	55(100.0)	217	V
5.	Political	10(18.2)	7(12.7)	2(3.6)	4(7.3)	25(45.5)	7(12.7)	55(100.0)	213	IV
6.	Miscellaneous	9(16.3)	7(12.7)	4(7.3)	4(7.3)	8(14.6)	23(41.8)	55(100.0)	229	VI

- Figures within parentheses indicate per cent of total respondents assigning the rank.
- Total of ranks R<sub>j</sub> for first factor viz Economic (j=1) is computed as [(19x1)+(14x2)+(12x3)+(5x4)+(3x5)+(2x6)] = 130 and similarly for other factors.
- Coefficient of Concordance W =  $\sum (R_j - \bar{R})^2 / (55)^2 (6)(6-1) = 0.23$
- $\chi^2$  with (n-1) = 5 d.f. = K(n-1). W = (55x5x.23) = 63.25 which is significant at 1% level of significance.

(Contd. on page 18)

## SPREAD SHEET

## Gender Gap Education-IV

HDI rank	Female adult literacy			Female primary net enrolment			Female secondary net enrolment			Female tertiary students			Female tertiary science enrolment (as % of female tertiary students) 1995
	Rate (%) 1997	Index (1985 = 100) 1997	As % of male rate 1997	Ratio (as % of relevant age group) 1997	Index (1985 = 100) 1997	As % of male ratio 1997	Ratio (as % of relevant age group) 1997	Index (1985 = 100) 1997	As % of male ratio 1997	Per 100,000 women 1996	Index (1985 = 100) 1996	As % of males 1996	
Low Human Development	—	—	—	50.4	117	80	21.1	116	60	—	—	—	—
140 Lao People's Dem. Rep.	46.8	142	66	69.2	104	90	52.9	113	72	151	141	42	11
141 Congo, Dem. Rep. of the	—	—	—	47.8	91	70	28.6	99	63	—	—	—	—
142 Sudan	41.3	171	63	—	—	—	—	—	—	—	—	—	—
143 Togo	38.3	166	56	70.2	144	74	40.0	167	52	107	228	20	5
144 Nepal	20.7	204	37	62.5	167	67	39.7	187	58	—	—	—	—
145 Bhutan	30.3	161	52	12.3	119	88	—	—	—	—	—	—	—
146 Nigeria	50.8	170	74	—	—	—	—	—	—	—	—	—	—
147 Madagascar	—	—	—	59.4	82	102	—	—	—	—	—	—	—
148 Yemen	21.0	243	32	—	—	—	—	—	—	156	57	81	31
149 Mauritania	27.8	133	56	59.8	212	91	—	—	—	105	—	14	—
150 Bangladesh	27.4	138	55	69.6	149	87	15.6	125	58	129	—	21	15
151 Zambia	67.5	127	81	71.7	84	98	34.9	104	71	—	—	—	—
152 Haiti	43.4	135	90	19.9	39	105	33.2	75	95	—	—	—	—
153 Senegal	24.8	165	56	53.6	136	82	15.5	120	65	—	—	—	—
154 Cote d'Ivoire	33.7	191	66	50.3	114	76	23.6	84	53	—	—	—	—
155 Benin	20.9	165	44	50.4	140	54	18.3	104	48	94	134	23	10
156 Tanzania, U. Rep. of	62.0	146	76	48.0	85	102	—	—	—	14	233	19	11
157 Djibouti	35.0	155	56	27.4	104	75	15.6	103	66	23	—	77	9
158 Uganda	53.0	143	71	—	—	—	—	—	—	99	309	47	—
159 Malawi	43.4	137	60	99.7	244	102	53.9	211	59	34	179	41	17
160 Angola	—	—	—	34.1	70	97	28.0	73	82	—	—	—	15
161 Guinea	23.9	173	46	33.2	189	56	6.9	73	31	24	47	13	—
162 Chad	37.1	155	58	35.2	185	58	9.6	135	37	14	233	15	—
163 Gambia	26.4	173	66	58.2	119	74	25.1	244	60	—	—	—	3
164 Rwanda	55.6	154	79	78.6	134	101	—	—	—	—	—	—	—
165 Central African Republic	30.1	191	53	37.8	80	69	12.7	68	50	—	—	—	—
166 Mali	28.3	222	65	31.2	217	64	12.9	222	56	—	—	—	—
167 Eritrea	—	—	—	27.9	—	91	34.3	—	83	22	—	—	—
168 Guinea-Bissau	18.3	198	37	38.8	111	59	16.4	162	51	—	—	13	—
169 Mozambique	25.0	172	44	34.3	73	76	17.1	74	62	19	380	31	—
170 Burundi	36.1	169	67	32.9	93	86	14.1	155	70	—	—	—	21
171 Burkina Faso	11.2	195	36	25.2	148	64	9.4	196	58	37	154	29	—
172 Ethiopia	29.2	187	70	27.0	110	62	17.5	109	55	24	100	24	8
173 Niger	7.2	188	33	18.5	108	61	6.5	163	53	—	—	—	11
174 Sierra Leone	20.0	179	42	38.8	88	79	—	—	—	—	—	—	—
All developing countries	62.9	122	79	82.9	108	94	54.8	128	83	—	—	—	31
Least developed countries	38.1	141	65	54.8	116	83	24.6	119	66	—	—	—	—
Sub-Saharan Africa	49.6	144	75	51.8	101	85	35.8	121	76	—	—	—	—
Arab States	46.4	150	66	82.1	113	91	56.8	130	85	1,287	—	73	30
East Asia	75.4	121	83	99.8	113	100	66.4	143	88	472	171	57	—
East Asia (excluding China)	94.0	105	96	98.3	99	101	94.5	111	102	4,084	189	61	18
South-East Asia and the Pacific	84.4	113	91	97.3	106	99	56.9	126	95	—	—	—	28
South Asia	38.6	137	59	72.1	116	86	46.0	135	70	536	149	61	—
South Asia (excluding India)	36.2	144	60	76.1	134	89	39.2	147	78	—	—	—	—
Latin America and the Caribbean	86.2	108	98	92.4	108	98	65.8	116	101	—	—	—	32
Eastern Europe and the CIS	—	—	—	—	—	—	—	—	—	2,234	—	112	33
Industrialized countries	—	—	—	99.9	102	100	96.3	106	100	4,486	130	110	23
World	—	—	—	85.2	107	96	60.8	119	87	—	—	—	—

Source: Human Development Report 1999, UNDP.

Table 3 : Ranking of main reasons for declining standard of education within different factors

Factor	Reasons	No. of teachers assigning ranks to the reason (within a particular factor)						Total No. of teachers assigning ranks	Total of ranks $R_j^*$
		1st	2nd	3rd	4th	5th	6th		
A. Economic	1 Less salary	25(45.4)	17(30.9)	4(7.3)	5(9.2)	2(3.6)	2(3.6)	55(100)	113(I)
	2 Inflation	11(20.0)	12(21.8)	11(20.0)	8(14.5)	6(10.9)	7(12.8)	55(100)	172(II)
	3 Expensive education	2(3.6)	6(10.9)	20(36.4)	12(21.8)	9(16.4)	6(10.9)	55(100)	208(IV)
	4 Medical Expenses	3(5.4)	6(10.9)	9(16.4)	13(23.7)	21(38.2)	3(5.4)	55(100)	217(V)
	5 Improper Accommodation	9(16.4)	8(14.1)	6(10.9)	10(18.2)	13(23.7)	9(16.4)	55(100)	202(III)
	6 Any other Computed Statistics	1(1.8) W = 0.32	5(9.1)	1(1.8) $\chi^2$ (5 d.f.) = 88.0**	3(5.4)	5(9.1)	40(72.8)	55(100)	292(VI)
B. Social	1 Intensified corruption	14(25.4)	17(30.9)	6(10.9)	10(18.2)	8(14.6)	—	55(100)	146(II)
	2 Nepotism	15(27.3)	10(18.2)	17(30.9)	8(14.5)	5(9.1)	—	55(100)	143(I)
	3 Regionalism	14(25.4)	12(21.8)	12(21.8)	10(18.2)	7(12.8)	—	55(100)	149(III)
	4 Maintenance of status	8(14.5)	12(21.8)	16(29.1)	9(16.4)	10(18.2)	—	55(100)	166(IV)
	5 Any other Computed statistics	— W = 0.34	—	2(3.6) $\chi^2$ (4 d.f.) = 77.9**	6(10.9)	47(85.5)	—	55(100)	265(V)
C. Ethical	1 Low Involvement in study	9(16.4)	15(27.3)	11(20.0)	9(16.4)	6(10.9)	5(9.0)	55(100)	168(III)
	2 Non-serious students	9(16.4)	13(23.6)	20(36.4)	7(12.7)	4(7.3)	2(3.6)	55(100)	155(II)
	3 Non-recognition of talent	24(43.4)	14(25.4)	7(12.7)	6(10.9)	4(7.3)	—	55(100)	117(I)
	4 Free will	5(5.4)	5(9.1)	6(10.9)	13(23.6)	21(38.2)	7(12.8)	55(100)	230(V)
	5 Lack of Punctuality and dedication	12(21.8)	6(10.9)	7(12.8)	13(23.6)	12(21.8)	5(9.1)	55(100)	187(IV)
	6 Any other Computed statistics	— W = 0.48	—	1(1.8) $\chi^2$ (5 d.f.) = 79.2**	2(3.6)	5(5.5)	49(89.1)	55(100)	320(VI)
D. Psychological	1 Personal Tension	16(29.1)	30(54.5)	9(16.4)	—	—	—	55(100)	103(II)
	2 Monotony of work	29	16	10(18.2)	—	—	—	55(100)	91(I)
	3 Any other Computed statistics	3(5.5) W = 0.40	3(5.5)	49(89.0) $\chi^2$ (2 d.f.) = 44.0**	—	—	—	55(100)	156(III)
E. Political	1 Intensified Political Interference	33(60.0)	22(41.0)	—	—	—	—	55(100)	77(I)
	2 Any other Computed statistics	7(12.7) W = 0.22	48(87.3)	— $\chi^2$ (1 d.f.) = 12.3	—	—	—	55(100)	103(II)
F. Miscellaneous	1 Lack of Accountability	12(21.8)	18(32.7)	9(16.5)	12(21.8)	4(7.2)	—	55(100)	143(II)
	2 Internal system of Examination	16(29.1)	10(18.2)	17(30.9)	7(12.7)	5(9.1)	—	55(100)	140(I)
	3 Inbreeding	13(23.6)	10(18.2)	12(21.8)	12(21.8)	8(14.6)	—	55(100)	157(III)
	4 Lack of Educational Equipments	10(18.2)	14(25.4)	4(7.3)	16(29.9)	11(20.0)	—	55(100)	169(IV)
	5 Any other Computed statistics	1(1.8) W = 0.37	—	2(2.6) $\chi^2$ (4 d.f.) = 80.5**	—	52(94.5)	—	55(100)	267(V)

1. Figures within parentheses indicate per cent of total

2. \*Roman numerals within parentheses indicate rank of reasons within a factor according to the value of  $R_j$ 

3. \*\*indicate significant at 1% level of significance.

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## CAMPUS NEWS

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### Sanskrit and Indian Culture

To commemorate the Sanskrit Year 1999, a two-day Regional Seminar on "Sanskrit — The Protector of Indian Culture" was organized by the Department of Sanskrit, Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya (Deemed University), Enathur, Kanchipuram, and conducted at Sri Sankara Math, Kanchipuram.

Inaugurating the seminar Dr. P.K. Mishra, Cardiologist, Apollo Hospital, Chennai, spoke on the glory of Sanskrit language and pointed out that "Sanskrit works on medicine" have an immense potentiality to be a great contribution to modern medical science.

Dr. V.T. Patil, Vice-Chancellor, Pondicherry University, who delivered the Keynote address, spoke at length on the affinity of Sanskrit and Indian culture. He emphasized that Sanskrit is the mother of all Indian languages, has an inherent unifying force which can measure up to future challenges.

In his presidential speech, Prof. N. Sankar, Vice-Chancellor of the host University talked about the greatness of Sanskrit. He spelled out the Deemed University's vision to develop Kanchi as a high-tech city, to set-up an Indian Museum and to bring out a Quarterly Journal — all with the intention of spreading Sanskrit language and Indian culture.

Releasing a collection of Abstracts of Regional Seminar, Jagadguru Sri Sankaracharya Pujyasri Sri Jayendra Saraswathi

Swamiji, gave His *Anugraha Bhashanam*. Swamiji urged the people to learn Sanskrit as an earnest attempt would not only expose the learner to a rich and resourceful language but also help in fostering the glorious culture of our country. This is so because Sanskrit and Indian culture are interwoven and hence learning and spreading of Sanskrit leads to the understanding and the protection of our own culture.

The seminar was conducted in six technical sessions where over a score of presentations were made. Important themes discussed at the seminar included Sanskrit as facilitator of National Integration; Elements of Indian Culture; Historical Sense and Record Keeping as Reflected in *Arthashastra*; Bharatiya Sanskrit Samshstasya Yogadanam; Bharatiya Sanskritah Raksanah Samshrta Bhasa; Social and Cultural Development in Sanskrit; Sanskrit — The Protector of Indian Culture; Sanskrit and Management Science; *Arthashastra* — A Classical Text on Ancient Indian Economy; and *Prachinabhoutika-sastram eka vimarsah*.

#### Valedictory Function

The function commenced with the chanting of Vedic hymns by the Vedic students of the Math in the presidency of the Vice-Chancellor, which was followed by "Vande Bharatam" recited by Dr. V.S. Potty (composed by himself). The Organizing Committee of the Seminar presented their "holy offerings" to Their Holiness Sri Sankaracharya Swamigals.

Vice-Chancellor Sri R. Sankar presided over the valedictory function. In his presidential address Sri Sankar appreciated and summarized the content of all papers, which were presented by the delegates of the Seminar.

In His Anugrahabhashanam (benediction) His Holiness Sri Jayendra Saraswathi Swamigal invoked "Sanskrit is never a dead language, because it is never born. And the question of death comes to things what is born". He added that the extensive Sanskrit literature is a reflection of the genius, intellectual abundance of the Sanskrit scholars.

His Holiness invoked "as a garland with different colours and fragrances, so is India with different cultural aspects. And the unifying thread is Sanskrit". For the protection and spreading of Indian culture, the spreading of Sanskrit is vital, as Sanskrit is the base and integrating factor.

#### Challenges 2000

The Institute of Management Technology (IMT), Ghaziabad plays host to the Second National Convention of Management Libraries Network (MANLIBNET) on Challenges 2000 at Ghaziabad on February 3-5, 2000.

Challenges 2000 will attempt perspectives on how the next millennium would affect Library and Information Professionals of today and tomorrow and the steps they must take to prepare themselves to meet the emerging situation.

The themes proposed to be discussed at the current include Challenges and Opportunities for Management Librarians in the

New Millennium; Networking and Resource Sharing vis a vis Electronic Information Environment; Knowledge Management; Electronic Library/Digital Library/Virtual Library; Business and Management Information Resources on INTERNET; and Cyber Laws/copyright.

Further details may be obtained from the Organising Secretary Mr. Ramesh C. Gaur, Librarian, Institute of Management Technology (IMT), P.O. Box. 137, Hapur Road, Rajnagar, Ghaziabad (U.P.)-201 001, Fax : 0575-724203, 724770, E-mail : ramesh\_c\_gaur@hotmail.com gaur@delnet.ren.nic.in

### **Marketing Inf Products & Services**

A Management Development Programme (MDP) on Marketing of Library & Information Products & Service (MLIPS) was conducted by the Indian Institute of Management, Lucknow (IIML) during November 15-18, 1999. Senior level Librarians and Information Managers (LIMs) from all over the country attended the programme.

The training package developed by Programme Directors, Dr. Roshan Raina (Librarian, IIML) and Prof. Prem C. Purwar (Faculty Member, IIML), included discussion sessions on i. Conceptual Framework of Marketing, ii. Marketing in Library & Information Context; iv. Cases on Marketing Mix in the Service Sector; and v. Organizational Preparedness, with eminent subject experts. Learning through cases was a unique feature of the programme package.

Participants provided a feedback on the programme, with the help of a structured questionnaire designed for the purpose as well as through a report presented in the valedictory function.

### **Improving Pharmacy Education**

A new uniform syllabus has been formulated by Pharmacy Council of India (PCI), making degree a minimum qualification for pharmacists for registration.

According to PCI president, Dr. C.K. Kokate, the Council wanted the new syllabus to come into effect at least by Jan. 2001 and was working on this for the past 18 months. The proposed syllabus would focus on imparting pharmacy education mainly 40 per cent on patient-hospital based, 40 per cent on industry based and remaining on basic science and allied courses, he said.

Saying that except India and Pakistan all other countries had made it compulsory for the pharmacists to have degree for registration, Dr. Kokate said that many of the universities in the country were not changing syllabus for long time. Even universities, with autonomous powers, were following 20 years old syllabus, he said.

The new syllabus would not have any effect on those, who were holding diploma at present. He said that PCI was also conducting a WHO sponsored scheme for continuing education programme for pharmacists, by which a grant of Rs. 30 lakh was provided on annual basis.

Dr. Kokate said out of nearly 5000 pharmacy colleges, both degree and diploma, in the country, 80 institutions had been selected for conducting the programme. All India Council for Technical Education (AICTE) and board of pharmacy have identified five centres for quality improvement programme in pharmacy education, with nodal centre at Kakatiya University at Warrangal in Andhra Pradesh.

With four zonal centres at Calcutta, Udhagamandalam,

Belgaum and Delhi, about 80 teachers would be selected for postgraduate and Ph.D. courses under the programme, he said. Dr. Kokate said PCI had held preliminary discussions with Indian Pharmaceutical Forum at Abu Dhabi for conducting continuing education programme there. The forum, with 3000 pharmacists as members, had sought advice from the council to set up degree colleges there, he said.

Earlier, delivering key note address at the fourth convention of association of pharmaceutical teachers of India, Dr. Kokate asked pharmacists to plan their strategies, with introspection of the achievements in last five decades, to meet the future challenges.

### **Water Science Cell**

The Indian Institute of Science (IISc) and the French Institute for Research Development (IRD) have signed a Memorandum of Understanding (MoU) to establish a "Water Science Cell" to scientifically study problems relating to water management and pollution.

The MoU was signed by IISc Registrar B.V. Ramakrishna and Mr. Jean-Pierre Muller, President, IRD, in presence of French Minister of Education, Research & Technology Claude Allegre, and IISc Director Dr. Govardhan Mehta.

Under the MoU, the cell, comprising scientists from India and France, is envisaged a long term collaborative programme, and the first phase of the programme is planned for five years. This cell will be unique in nature, devoted to the study all aspects of water science and technology, integrating various scientific disciplines.

In view of the wide variation in availability of water, there was need for conservation in order to exploit and manage water re-



source potential. The Department of Civil Engineering and Metallurgy of IISc will initially take two specific projects — an integrated study of hydrology and mineralogy for assessment of water quality and quality in sub-catchment/watershed; and another project on surface chemical and biochemical aspects of heavy metal dissolution and transportation, with particular reference to mining and its effect on water quality.

The IISc also signed a supplement to another MoU with the Toulouse University Network to enhance co-operation in the fields of research and education. The MoU was earlier signed in June 1999 for cooperation in areas like electronics and informatics, water and environmental sciences, biotechnology and medical sciences, space and aeronautics, and mechanical engineering.

The supplement MoU is aimed at creating and funding an Indian Chair at TUN. This Chair is for the faculty of any Indian academic institutions having an MoU with TUN. Thus, IISc professors will be invited to this Chair. The selection will be held by a joint-Committee from IISc and TUN.

Earlier, Dr. Mehta was conferred the title "Chevalier" in the order of "Pales Academiques" by Mr. Allegre on behalf of the French Government.

On receiving the title, Mr. Mehta said, "it is a symbol of scientific activity and the long Indo-French co-operation."

In his address to the faculty and students of IISc, Mr. Allegre commended India's strides in the field of information technology and said France would stand to gain from India's progress in this field. He stressed on cooperation, and exchanges of students and faculty concerned with it.

He said his country would welcome Indian students in the fields of common interest between the two countries. "We want to encourage and increase the number of Indian students coming to France, and at the same time more French students to India for higher studies," he added.

### **Punjabi as Medium of Exam**

In the Tercentenary Year of the Khalsa Panth as also keeping in view the social structure of North region students studying in the Directorate of Correspondence Courses of the University, who have Hindi or Punjabi as their mother tongue, the Vice-Chancellor of Kurukshetra University, Dr. M.L. Ranga has allowed Punjabi language as the medium of examination in addition to Hindi and English in some selected courses which include B.A. Part-I, II, III, M.A. Political Science, Economics, History, Public Administration, Diploma in Library & Information Science, Postgraduate Diploma in Journalism & Mass Communication, Postgraduate Diploma in Environmental Education and Postgraduate Diploma in Tour & Travel Management with effect from the academic session 1999-2000. This decision will enable the students to perform well and to secure better positions in the University examinations. Study material will, however, be supplied in the language it is available, Hindi or English.

The Director of the Directorate of Correspondence Courses, Mr. L.C. Gupta disclosed that the students passing or obtaining compartment in 10+2 class by appearing in full subjects in their supplementary examinations were also eligible to seek admission in the Directorate in courses like B.A., B.Com., BBA, BCA and CCA.

Similarly students having cleared the compartment in Bachelor's level degree courses in the supplementary examination were also eligible to seek admission in Master's Degree courses of English, Hindi, Punjabi, Political Science, Economics, History, Sanskrit, Public Administration, Mathematics and M.Com., MFM, MMM as also Postgraduate diploma courses of Computer Applications, Export Marketing Management, Marketing Management, Tourism & Hotel Management, Tour & Travel Management, Translation (Hindi/English) and B.Lib. & Information Science. He said that such students would be able to seek admission accordingly by paying dues with late fee upto December 31, 1999.

### **Goa Varsity Automates Lib Services**

The then Governor of Goa, H.E. Lt. Gen. J.F.R. Jacob, recently inaugurated the Automated Library Services of the Goa University. The inauguration coincided with the National Book Week celebrated all over India from Nov. 14th - Nov. 20th.

The Governor said that another significant landmark had been achieved in the continuing development of the Goa University. He felt that Libraries had become a vital vehicle for promoting education.

Presiding over the function, Vice-Chancellor, Prof. B.S. Sonde said that knowledge had to be accessible to students and teachers and with the automation of the Library, the same will be possible to a large extent. He remarked that a library formed an integral part of every institution. He revealed that the Goa University Library was in the process of linking with the libraries of other universities and institutions. "In future we hope to func-



tion as a paperless university", Prof. Sonde added.

Dr. P.V. Konnur, Librarian of Goa University, presented the re-

port of the automation activities of Goa University and also detailed the automated services being launched.

time between seed treatment and planting of the treated seed, is three to four months.

As regards the large-scale commercial use of biopesticides, Dr. Mukhopadhyay said some private firms had sold some quantities, but ultimately the State Government would have to popularise it among the farmers. The AAU would provide the technical support.

Stressing the importance of using biopesticides on a large scale, Dr. Mukhopadhyay said this had also a direct bearing on our farm exports as tea, fruits and vegetables exported by India were often rejected for containing chemical pesticides.

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## ***News from Agricultural Universities***

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### **AAU Develops Biopesticides**

The Assam Agricultural University (AAU), Jorhat, has developed some biological pesticides which have been successfully used for pest control and control of plant diseases.

The thrust the world over now is on replacing chemical pesticides with Biopesticides. Chemical pesticides, while destroying pests are also absorbed by the plants when they are sprayed. Eventually, they enter the human body when the cereals and fruits are eaten. In the long run, they are harmful.

Dr. A.N. Mukhopadhyay, Vice-chancellor of the AAU, said the biopesticides are fungus-based. Of these, *Beauveria bassiana* is very effective against rice hispa *Diuraphis armigera*, a common pest of the paddy crop which is endemic to certain low-lying areas of Assam and causes as much as 35 to 65 per cent loss in paddy yield in the wet season.

For control of certain plant diseases, *Trichoderma harzianum*, first developed at Pantnagar in 1980, and *Gliocodium virens*, have been successfully used.

In the case of rice hispa, the biopesticides enter the body of the insect and kill it from within. Disease-controlling biopesticides (fungi) grow around seeds treated with it and act like a protective cover resisting invasion of germs or pathogens.

Two to three grammes of biopesticide are enough to treat a kg of paddy seeds.

The cost of a kg of biopesticide will be between Rs. 100 and Rs. 150, against Rs. 200 per kg of chemical pesticides.

The "shelf-life" of a biopesticide, that is, the normal

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## ***AIU NEWS***

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### **HRD in Dairying**

A seminar on "Human Resource Development in Dairying — A March Towards 21st Century" was recently organised at the National Dairy Research Institute, Karnal. The Seminar was sponsored by Association of Indian Universities as part of its Platinum Jubilee Year celebrations. The topics delineated for discussion in the Seminar included (i) Growth and Development in Dairy Education; (ii) Challenges in Dairy Education in the next millennium; (iii) Future of dairy Education — System and Management; and (iv) Dairy Education with value added human resources — Emphasis on quality and quantity.

In his inaugural address, Prof. K.B. Powar, Secretary General, Association of Indian Universities, stressed better allocation of funds for higher education as only 6 per cent of population reached the level of higher education.

Expressing satisfaction over manpower development in the field of dairying, he said that various aspects of curriculum development needed immediate attention to meet the challenges in the next millennium.

Dr. R.C. Chandan, President, Global Technologies Inc. (U.S.A.) presented information on the curricula and academic requirements and future scope of Food Science and Technology. He elaborated the structure of the undergraduate curriculum in Food Science & Technology consisting of General Courses, Core Courses and Supporting course. He emphasised the need for career advancement system in companies and academic institutions.

Dr. B.N. Mathur, Director, National Dairy Research Institute (NDRI) in his address highlighted the need for planning of human resources to meet the global chal-

lenges in the next millennium. Dr. Mathur spoke of various systems of Dairy Education in Europe, New Zealand and other developing countries and highlighted the role played by dairy industry in these countries in promoting dairy education.

Earlier, welcoming the delegates Dr. S. Singh, Joint Director, National Dairy Research Institute (NDRI) and Chief Coordinator of the seminar presented an overview of Dairy Education in India.

A large number of participants from different agricultural universities and dairy science colleges in the country attended the seminar.

Eight papers were presented in the three Technical Sessions of the Seminar and after thorough discussion the following recommendations were finalised :

1. There is a need to establish an Empowered Committee to monitor Dairy Education at various levels of HRD to assure implementation of requisite minimum standards of Education. This Committee should also ensure development of necessary infrastructure for imparting good quality dairy education.
2. In order to ensure effective teaching, each Dairy Science College should be provided with a functional dairy plant with 5000-10000 lit. capacity. The linkage should be established between the college and the Cooperative Dairy Federation of the Area.
3. The Human Resource Development in the country should be need based and value oriented.
4. The Dairy Industry should be actively involved in the development of curricula of dairy education in India.
5. In order to match global curriculum requirements, new areas like Biotechnology, Information Technology, Renewable Energy Management, Agricultural Business Management, Post-harvest Technology, Diversification and Value addition need to be emphasized.
6. Mechanism should be developed for teachers to refresh and update their knowledge in the subjects and teaching skills.
7. Autonomy of the Academic Bodies should be honoured. Indian Dairy Diploma should be continued to provide human resource at operational level.
8. Dairy education in India should be declared as technical level.
9. In all the disciplines of dairy science education criteria of equal pay for equal work should be adopted.
10. To bring uniformity and improvement in dairy education in the country a Dairy Council of India on the lines of Veterinary Council of India should be established.

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## *News from UGC*

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### **Countrywide Classroom Programme**

Between 27th December to 31st December, 1999 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programmes are telecast on the Doordarshan's National Network from 9.30 to 10.00 a.m. every day except on Saturdays & Sundays. These programmes are also telecast on Doordarshan's National Network from 6.00 to 6.30 a.m. on all days of the week. On DD2 International Programme will be shown at 11.00 to 12.00 hours on Saturdays only.

#### **27.12.99**

"Physics of Music-1 : The Magic of Flute"  
 "The Kolams-1"  
 "Touch of Genius"

#### **28.12.99**

"Saraswati — The legacy of a lost river in the Thar Desert"

"Touch of Genius"  
 "The Kolams-2"  
 "Water Resources"

#### **29.12.99**

"Paralysis of Speech  
 Aphasia-1"  
 "Gul Mohar"  
 "In Search of Ethnic Dimensions — The Koyas-1"  
 "Jhelum — Purity to Pollution"

#### **30.12.99**

"Role Model : The sage Scientist — Dr. Sudhir Nath Sanyal"  
 "Question Time-130"  
 "The Hindu Temple  
 Sikharas-1 Lake Hussain Sagar"

#### **31.12.99**

"Satyendranath Bose : Scientist with a Mission"  
 "In Search of Ethnic Dimensions — The Koyas-2"  
 "Silk Weaving"

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## BOOK REVIEW

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### Hazy Profiles - Cloudy Vision

Om Prakash\*

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M.L. Sisodia, K.S. Dindor & B.M. Agrawal. *Profile of Higher Education in Rajasthan Government Colleges*. Jaipur, University Book House Pvt. Ltd., 1998. Pp.277. Rs. 595/-.

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The growth of higher education in our country is often described as phenomenal but unplanned. Therefore an attempt at drawing profiles of existing facilities and making projection impending needs is bound to arouse high expectations. A reader picks up the work of Sisodia et al with deference due to the outcome of a major research project. But he is in for grave disappointment. He finds that its Chapter 4 and many appendices are mere reproduction of material from official files that is also readily available in calendars issued by some of the bigger colleges. The core of the book, forming exactly half of its bulk, is its Chapter 5-Profiles of Government Colleges. On a closer look, this chapter turns out to be just a collection of carelessly filled responses to a drab un-incisive questionnaire. So much so that remark "details not available" is found given in the column for "hostels" in the profile of M.S.J. College, Bharatpur. Not available to whom — to a researcher, or to his co-author who was acting Director of Collegiate Education, or to the Principal? Amusing instances of internal inconsistency are provided by four profiles (of Bundi, Jhalawar, Girls' Ajmer, Girls' Chittorgarh) in which name of

Principals given in bold type differ from the names in the faculty lists printed in small type! It pains to find that in at least ten cases, names given to government colleges on sentimental grounds have not been mentioned on top of their profiles. The extent of factual errors and omissions is exemplified by the first two profiles taken as natural specimen. The first in the profile of Government College, Ajmer. Changes of affiliation of the College to different universities have been mentioned in this profile only, half-heartedly without mentioning years of change. A grave omission is of honours courses being taught at the college for over three decades and also of prestigious M.Phil. courses being taught for over a decade. Neither number of sanctioned seats nor actual enrolment coursewise/subjectwise, nor even the total enrolment of the College, has been mentioned in support of the remark, "enrolmentwise it is one of the biggest colleges in the state". The stated figure of seating capacity of its auditorium is a gross understatement. Contrary to the statement in the profile, bus facility was never available to boys. The profile does not record the fact of the College having a large men's hostel within its campus that presently houses the Girls College. The second profile, of Government Girls' College, Ajmer also does not reveal the fact of its running in a hostel building. No hostel has

rooms so large as to accommodate eighty students. Therefore, claim in the profile that the Girls' College has enrolment of eighty in each part of B.A. and B.Com courses appears to be true on paper only.

Analytic questioning and statistical analysis could have yielded more meaningful data. For example, light could be thrown on viability of colleges and popularity of courses/subjects. Trend of admission of students from underprivileged sections of society could be revealed. But the profiles do not give figures and percentages of such admission even for the colleges described as catering largely to such categories (Dausa, Banswara). Use of vague adjectives 'sufficient', etc attempt to conceal the sorry state of many of library. The number of journals is generally given clubbed not only with magazines but also with newspapers. The profile of M.S.J. College, Bharatpur, describing it as "biggest college of eastern Rajasthan", provides separate figures of subscribing to "15 newspapers, 14 magazines and *three subject journals*". The degree College at Ramgarh subscribes to 7 newspapers, 8 magazines and only 1 science journal. Lack of analytic enquiry and field study conceals the malaise of mounting heaps of unclassified books, at places being of the order of one-fourth of total collection. Many colleges are going without qualified librarian and/or P.T.I. and are often short of assistant librarians, since recruitment to these posts has not been made for more than five years now.

Let us now throw a quick glance at remaining chapters of the book under review. As a footnote admists, Chapter 1 was written for

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\*Retired Director of College Education, Rajasthan, 26/3, Civil Lines, Ajmer-305 006.

some other publication. It presents a cursory survey of historical growth of education in the State. The sweeping statement on page 15, that the experiment of autonomous colleges failed, needs both elaboration and elucidation. The academics in the State have not forgotten the days when the then minister for higher education was bent upon compelling the universities to have a common syllabus. The possibility of some colleges framing their own syllabus was beyond his comprehension and tolerance and was eliminated. Chapter 2 discusses growth of higher education in some greater detail, with discrepancies as at other places. For example, Table 2.5 includes, but Table 2.6 and 2.6A exclude, constituent colleges of the university from the total number of colleges for liberal education. Their number is 236 in these latter tables but only 227 in Table 2.7. Sanskrit colleges and polytechnics imparting diploma-level education have been counted as professional colleges for the years 95-96 and 96-97 but not for other years in one and the same Table 2.5. The Appendix A8, related to sec. 2.3.4, makes a serious mistake of describing M.B.M. Engineering College, Jodhpur as still being an affiliated college when, in fact, it became faculty of engineering of the Jodhpur (now J.N.V.) University from its inception in 1962.

The authors make another sweeping observation on page 24, "The consequence of the phenomenal growth has been a general lowering of academic standards and quality of education." If they really believe that lowering of standards is a necessary consequence of growth, then 'the perspective' for the year 2011 A.D. they present in the next chapter should be called a nightmare rather than a vision! Why mercily applying the "rule of three" of elementary arithmetic, they calcu-

late that on the assumption of 6 per cent of population in relevant age group joining colleges and universities for liberal education, their enrolment in the year 2011 A.D. would be 3,31,200. On the assumption of this percentage being 10 or 15, the enrolment would be 5,52,000 or 8,28,000 as the case might be. They also note Vaish's estimate of enrolment being 10 lakh. But they do not at all apply their minds to examining the probability or likelihood of these widely (or wildly!) differing estimates. They go on to suggest, "The State of Rajasthan, as a matter of policy, could decide to limit the participation rate to 10 per cent of eligible population" They do not attempt to show that, if not restricted, this rate is bound to exceed the 10 per cent limit and that such restriction would be desirable and feasible in a democratic society. The Appendix A9 is presented as the culmination of their exercise. They must be joking when projecting that 12 years hence, the district of Barmer would need 27 colleges against the existing 5, Bundi would need 10 against existing 2 but Ajmer would do with

21 against 20 it already has and Jhunjhunu would do with 20 against the existing 18. Baffled by their own projections, the authors blow hot and cold in the same book. They recommend at the end of this chapter "private participation in all sectors of higher education by removing hurdles of affiliation and loosening government control." But they are on record declaring, on page 31, that the options to allow private participation "means education for the 'haves', 'have-nots' being automatically eliminated." They talk of allowing market forces to determine fate of institutions, on the one hand, and of need of state safeguarding interests of consumers on the other, in one and the same para on page 40.

The constraint of space demands that this review comes to its end without listing numerous mistakes in the book but with the observation that its price is quite high, particularly when UGC assistance for major research work has been utilised for its preparation. However, it would have been equally difficult to recommend this book at any throw away price. □

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**Vallabh Vidyanagar**  
**Date : 8.12.1999**

**Harish Desai**  
**INCHARGE REGISTRAR**

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# THESES OF THE MONTH

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## A list of doctoral theses accepted by Indian Universities (October-November 1999)

### SOCIAL SCIENCES

#### Anthropology

1. Bordoloi, Paban. *The Devadasi art form of Assam: A critical study.* (Prof N C Sarma), Department of Anthropology, Gauhati University, Guwahati.

2. Choudhury, Bhagirathi. *Socio-economic implications of shifting cultivation data from Pauri Bhuyan of Keonjhar, Orissa.* (Dr S N Rath), Department of Anthropology, Sambalpur University, Jyoti Vihar, Burla.

3. Deb, Saikat. *Cephalofacial deformities in congenital disorders: Search for a helpful diagnostic aid.* (Dr P N Sahu), Department of Anthropology, Sambalpur University, Jyoti Vihar, Burla.

4. Naik, Indira. *A comparative study on nutrition and its effects on tribal health: Analysis of data from three Oraon villages in Sundargarh District, Orissa.* (Dr S N Rath), Department of Anthropology, Sambalpur University, Jyoti Vihar, Burla.

5. Roy, Babul. *Socio-cultural and environmental dimensions of tribal health: A study among the Dimas Kacharis and Zemi Nagas of N C Hills District in Assam.* (Prof A N M Irshad Ali), Department of Anthropology, Gauhati University, Guwahati.

#### Commerce

1. Pradhan, Ganeshwar. *Financial performance of sugar industry in Bihar.* (Dr M H Ansari), Department of Commerce, Patna University, Patna.

2. Verma, Raj Kapoor. *M P mein Ekikrit Gramin Vikas Karyakram ka nirdhanon ke aye tatha rojgar per prabhav ka adhyayan: Dewas Jile ke vishesh sandarbh mein.* (Dr B P Mishra), Department of Commerce, Devi Ahilya Vishwavidyalaya, Indore.

#### Economics

1. Ajit Kumar, M K. *Psychographic and demographic profiles of foreign tourists visiting Kerala with special reference to spending patterns.* (Dr D Rajasenan), Department of Economics, Cochin University of Science and Technology, Kochi

2. Hiremath, Sangamesh. *Effectiveness of personal income tax in India.* (Dr B N Nimbur), Department of Economics, Gulbarga University, Gulbarga.

3. Kasse, Prakash Vithalrao. *Study of agro processing industries in Maharashtra State.* (Dr S P Kalyankar), Department of Agricultural Economics, Marathwada Agricultural University, Parbhani.

4. Kaushal, Sumita. *An analytical study of inter-state disparity of agricultural productivity growth in India, 1951-91.* (Dr N G Pendse and Dr Manohar Pandit), Department of Applied Economics, Rani Durgavati Vishwavidyalaya, Jabalpur.

5. Mishra, Rajesh Kumar. *Impact analysis of poultry enterprises and its linkages in Jabalpur Division of Madhya Pradesh.* (Dr P K Awasthi and Dr R K Tiwari), Department of Economics, Rani Durgavati Vishwavidyalaya, Jabalpur.

6. Mishra, Srijit. *Micro processes and institutions in tribal*

*agrarian economics: A study of two villages in Orissa.* (Dr G N Rao), Department of Economics, Jawaharlal Nehru University, New Delhi.

7. Moogangouda, N. *Financing of Integrated Rural Development Programme: A case study of Tungabhadra Gramin Bank.* (Dr H Basanna), Department of Economics, Gulbarga University, Gulbarga.

8. Tiwari, Narendra Kumar. *Negotiations on high technology transfer to India from US: Case studies in information and environmental technologies.* (Dr K D Kapur), Centre for Studies in Diplomacy, International Law and Economics, Jawaharlal Nehru University, New Delhi.

9. Vighneswara Rao, S. *Indebtedness and land transfers among tribals: A comparative study in scheduled and non-scheduled areas of Visakhapatnam District.* (Prof R M Mohana Rao), Department of Economics, Andhra University, Waltair.

#### Education

1. Devender Singh. *An investigation into the study habits, reading interest, attitude towards teaching and their bearing upon the achievement of the pre service teachers.* (Dr D K Chaddha), Department of Education, Maharshi Dayanand University, Rohtak.

2. Gautam, Aditya. *Cost-effectiveness of continuing Engineering Education in India: A case of Roorkee University.* Department of Humanities and Social Sciences, University of Roorkee, Roorkee.

3. Gayan, Alaka. *Adult Education programme among the scheduled castes populations of Kamrup District with particular reference to the improvement in their literacy standard and functional skill.* (Dr L Das), Department of Education, Gauhati University, Guwahati.

4. Kalamadi, Meena Bhaskarrao. *Development and evaluation of a user-friendly microcomputer software to aid school children in English composition writing.* (Dr K Ramachandrarachar), Department of Education, Karnatak University, Dharwad.

5. Mehtab Singh. *An exploratory study of adjustment problems of professional and non professional students in relation to their self concept and anxiety.* (Dr D K Chaddha), Department of Education, Maharshi Dayanand University, Rohtak.

6. Nagarajaiah, R. *A critical study of utilization of the community resources in teaching social sciences in secondary schools of Bangalore rural district.* (Dr M M Pattanashetti), Department of Education, Kuvempu University, Shimoga.

7. Namdeo, Ram Charan. *Cross sectional analysis of general motor ability components in children from twelve to eighteen years of age.* (Dr R K Yadav), Department of Physical Education, Rani Durgavati Vishwavidyalaya, Jabalpur.

8. Pandya, Ajaykumar Anilkumar. *Dhoran Panchthi Satna Gujarati bhashi vidyarthio mate smuh buddhiman kashitri: Rachana ane pramanikaran.* (Dr Himmatbhai Reya), Department of Education, Bhavnagar University, Bhavnagar.



9. Raja Rao, D. A study of Jana Shikshana Nilayam in Visakhapatnam District of Andhra Pradesh. (Dr P Ch Lakshminarayana), Department of Adult and Continuing Education, Andhra University, Waltair.

10. Ramar, R. Effectiveness of multimedia based modular approach with special reference to slow learners. Department of Education, Alagappa University, Karaikudi.

11. Sarala Kumar, M M. School climate, role stress and valued outcomes : A study on headmasters. (Dr M J V Gurunadham), Department of Education, Nagarjuna University, Nagarjunanagar.

12. Singh, Indubala Ummed. Environmental education through video instructional package : An exploration. (Dr R B Chaudheri), Department of Education, South Gujarat University, Surat.

13. Vairamani, S. Construction of test and compilation of norms for measurement of agility for Kendriya Vidyalaya boys of Chennai Region. Department of Physical Education, Alagappa University, Karaikudi.

14. Virk, Jasbir Kaur. A study of motivational areas of special groups of students of different levels of socio economic status and intelligence. (Dr B S Dagar), Department of Education, Maharshi Dayanand University, Rohtak.

#### Journalism

1. Laha, Prabir. Bharater, swadhinata sangrame Prabasi patrikar bhumika, 1930-1942 khristabda, 1337-1349 Bangabda. (Prof Sunit Kumar Mukherjee), Department of Journalism, University of Calcutta, Calcutta.

#### Law

1. Koteswara Rao, D. Constitution as instrument to achieve social justice : Concept of equality in the matters of public employees. (Prof K Srinivas Rao), Department of Law, Osmania University, Hyderabad.

#### Management

1. Indurkar, Hemant. Marketing strategies of Indian wrist watch industry. (Dr Rajiv Gupta), Department of Management, Devi Ahilya Vishwavidyalaya, Indore.

#### Political Science

1. Bais, Priya Bala. M P mein panchayati raj ka karmik vikas : M P Panchayati Raj Adhiniyam 1993 ke sandarbh mein. (Dr S S Bagga), Department of Political Science, Devi Ahilya Vishwavidyalaya, Indore.

2. Mishra, Bhabani. The Indian and US position on South Asian security with special reference to the NPT. (Prof R P Kaushik), Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

3. Nagendra Rao, Vytila Veera Venkata. Dynamics of ethno-nationalism in post-Soviet Central Asia : A study of various conflictual factors. (Prof R R Sharma), Centre for Russian, Central Asian and East European Studies, Jawaharlal Nehru University, New Delhi.

4. Rajpraveen, C M. Continuity and change in US FRG relations in the post-cold war era. (Prof Christopher S Raj), Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

5. Sarkar, Amaresh Kanti. Co-operatives in rural develop-

ment : A study of the role of the Cooch Behar Co-operative Agriculture and Rural Development Bank Ltd since 1977. (Prof P K Sengupta), Department of Political Science, University of North Bengal, Raja Rammohunpur, Distt Darjeeling.

#### Psychology

1. Bhakta, Upendra. Emergence of a new psychology in tribal Bihar under the impact of industrialisation. (Dr Krishna Kumar), Department of Psychology, B R Ambedkar Bihar University, Muzaffarpur.

2. Kashyap, Kavita. Relationship of occupational stress and emotional maturity with mental health and adjustment among married working women. Department of Humanities and Social Sciences, University of Roorkee, Roorkee.

3. Talukdar, Rita Rani. Cognitive competence among the tribal children. (Dr O P Singh), Department of Psychology, Gauhati University, Guwahati.

4. Thakur, Archana. Adjustment, anxiety and ego strength in relation to mental health. (Dr Rajendra Mishra), Department of Psychology, Dr B R Ambedkar Bihar University, Muzaffarpur.

#### Public Administration

1. Srinivasulu, Aakuthota. Organisation and working of AP State Irrigation Development Corporation. (Prof Ch Bala Ramulu), Department of Public Administration, Kakatiya University, Warangal.

#### Social Work

1. Rajendran, K. Social work perspectives on impact of schizophrenia on work and family. (Dr M Ranganathan), Department of Psychiatric Social Work, National Institute of Mental Health and Neuro Sciences, Bangalore.

#### Sociology

1. Chengalvarayan, P. Women Mathematicians : A feminist critique. Department of Women's Studies, Alagappa University, Karaikudi.

2. Dastider, Mollica. Minorities in Nepal : A study of the Muslim community. (Prof S D Muni), Centre for South, Central, South-East Asian and South-West Pacific Studies, Jawaharlal Nehru University, New Delhi.

3. Dom, Deen Dayal. Dom Dumar samudaya mein samajik parivartan : Jabalpur Nagar ke vishesh sandarbh mein. (Dr P B Sengupta), Department of Sociology, Rani Durgavati Vishwavidyalaya, Jabalpur.

4. Jacob, Sindhu. Changing status of rural women: A comparative study of three villages in Raisen and Bhopal Districts of MP. (Dr Gautam Gyanendra), Department of Sociology, Barkatullah Vishwavidyalaya, Bhopal.

5. Jain, Manjula. Socio-economic aspect of the working women : A case study of ONGC, Dehradun. Department of Humanities and Social Sciences, University of Roorkee, Roorkee.

6. Kanavi, Ranjana Chennaveera. Mass health camps : An approach in public health services, a study in medical sociology. (Dr C A Somashekharappa), Department of Sociology, Karnatak University, Dharwad.

7. Srujana, K. The role of South African women in the struggle against apartheid. (Prof Anirudha Gupta), Centre for West Asian and African Studies, Jawaharlal Nehru University, New Delhi.

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## COMMUNICATION

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### Quality and Motivation of Students

I saw the article by S.L. Mahajan (*University News*, 14.6.99) as a reaction to my article on Alienation of Teachers (*University News*, 11-1-99).

There he asks the rhetorical question as to who will produce the highly motivated students of high quality that I would like to teach. He himself would like accept the challenge of teaching unmotivated students of low quality. I would also love to do so. However our students are neither of low quality nor they are unmotivated. They are highly motivated to get degrees, they are highly motivated to work really hard for two or three months near the examination, they are highly motivated to commit to memory answers to many likely questions in the examination, they are highly motivated to buy made-easy books and study them, they are highly motivated to pay large sums of money to their own teacher for private tuitions, they are highly motivated for selective study and for getting maximum marks by doing minimum work and they are so highly motivated that they are prepared to take the risk of using unfair means in the examinations.

However they are not interested in learning in depth from standards text books or reference books or in learning all the topics prescribed for a course. They are only interested in learning from made-easy books, answers to selected questions suggested by tutors who are prepared to help them in this selective study. They are not interested in learning from teachers who are interested in teaching in depth or in learning throughout the year.

The students are not be blamed

for this. Our educational system does not expect to work hard throughout the year and to learn in depth. In fact there are diminishing returns from works done in excess of the minimum necessary to pass examination because in question papers no question can be set which require a deep understanding and there is plenty of choice in every question paper. A teacher can motivate a student who is unmotivated, but cannot motivate a student who has already been given a negative motivation in the present system. We cannot put a number of obstacles in the path of a teacher and ask him to cross these hurdles on the way of good teaching. Of course, some teachers are happy in the present system because students who are motivated in just passing examinations do not insist on their taking classes regularly, they do not bother the teachers with their difficulties throughout the year, they do not question the way their answer books are graded simply because teachers do not grade their answer books. In other countries highly motivated students do not allow a single class to be missed and they discuss the way their answers book are marked by their own teachers. In some countries there is no retirement age for teachers but still teachers take voluntary retirement because the student are highly demanding.

Mr. Mahajan makes some suggestions for restructuring the system for continuous internal objective assessment. If all the suggestions made by him or made earlier in various reports of education commissions or made by me, in my book [1-4] are implemented so that

the students automatically become interested in learning in depth and in attending classes regularly, I would not only like to become a teacher in my next birth, but I would like to become a teacher in all future births. The system has to be restructured so as to make students and teachers automatically motivated in learning and scholarship, I would not like to become a teacher in a society or in any institution where teachers are not trusted to examine their own students in an open transparent system and where students are not trusted to evaluate the teaching of their teacher and where 99% of teachers and 100% of students are not involved in curriculum making. I would not like to be a teacher in a system where teachers and students can be exploited by vested interests which keep the requirements of learning and teaching deliberately low so that both students and teachers are available for political purposes for 9 months in a year.

Thus the answer to the question as to who will produce the motivated students whom I would like to teach is simple. It is a restructured system of education in which students not interested in learning and teachers not interested in teaching will not survive. Such systems are already available in all developed countries of the world and they continue to produce highly motivated students year after year and good teachers have only to motivate the few students who remain unmotivated in spite of the system. The systems are based on trust of students and teachers and on automatic checks and counter checks. We need courage to adopt similar system and the sooner we do so the better it would be for the country and for future generations.

J.N. Kapur  
C.V. Kapur Education Foundation  
C-766, New Friends Colony  
New Delhi-110 065



# AGRICULTURAL SCIENTISTS RECRUITMENT BOARD

KRISHI AND SANDHAN BHAVAN, PUSA, NEW DELHI-110012

Advt. No. 8/99

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## DEPUTY DIRECTOR GENERAL

Pay Scale : Rs. 25000 (Fixed)

INDIAN COUNCIL OF AGRICULTURAL RESEARCH HEADQUARTERS, NEW DELHI

**375. Deputy Director General (Natural Resource Management) (One Post)**  
*Qualifications Essential :* i) A doctoral degree in Soil Science/ Agronomy/ Natural Resource Science. ii) An eminent scientist/teacher having at least 8 years experience in the grade of Principal Scientist (Rs. 16400-22400) or in an equivalent position out of which 3 years experience should be in a Research Management Position or in an equivalent position. OR An eminent Scientist having proven record of scientific contribution working in a reputed organisation/ institute having 21 years of experience in the relevant subject out of which 3 years experience should be in a Research Management Position or in an equivalent position. iii) Evidence of contribution to research/ teaching/ extension education/ management as supported by published work/ innovations. iv) Specialisation and experience in Soil Science/ Agronomy/ Agroforestry/ Natural Resources Management. *Desirable :* Experience of Managing Natural Resources at Regional/ National level.

## DIRECTORS AND PROJECT DIRECTORS OF INSTITUTE

Pay Scale : Rs. 16400-450-20900-500-22400 (Minimum pay to be fixed at 17300 on initial appointment)

INDIAN LAC RESEARCH INSTITUTE, RANCHI

**376. Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Agricultural Science/ Technology. ii) At least 5 years experience as a Principal Scientist (Rs. 16400-22400) or in an equivalent position. OR An eminent Scientist having proven record to scientific contribution working in a reputed organisation/ institute having at least 18 years experience in the relevant subject. iii) Evidence of contribution to Research/ Teaching/ Extension Education as supported by published work/ innovations. iv) Specialisation in Lac production or primary processing and industrial liaison preferably of lac. *Desirable :* Experience in a Research Management Position.

SUGARCANE BREEDING INSTITUTE, COIMBATORE

**377. Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No. 376(ii) & 376(iii) above. iv) Specialisation in Sugarcane Research. *Desirable :* Experience in Crop Improvement and Research Management.

CENTRAL INSTITUTE FOR COTTON RESEARCH, NAGPUR

**378. Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No. 376(ii) & 376(iii) above. iv) Specialisation in Fibre Crops. *Desirable :* Experience in Crop Improvement and Research Management.

NATIONAL INSTITUTE OF RESEARCH ON JUTE AND ALLIED FIBRE TECHNOLOGY, CALCUTTA

**379. Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in Fibre Technology/ Agricultural Engineering/ Chemical Technology/ Applied Chemistry/ Applied Physics. ii) & iii) As in Item No. 376(ii) & 376(iii) above. iv) Specialisation in Fibre Technology or primary processing and industrial liaison preferably of jute and Allied Fibres. *Desirable :* Experience in a Research Management Position.

NATIONAL RESEARCH CENTRE ON PLANT BIOTECHNOLOGY (I.A.R.I.), NEW DELHI

**380. Project Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in Plant Biotechnology/ Molecular Biology/ Biochemistry/ Genetics/ Plant Breeding/ Botany. ii) & iii) As in Item No. 376(ii) & 376(iii) above. iv) Specialisation in Plant Biotechnology. *Desirable :* Experience in a Research Management Position.

DIRECTORATE OF RICE RESEARCH, HYDERABAD

**381. Project Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No. 376(ii) & 376(iii) above. iv) Specialisation in Rice Research. *Desirable :* Experience in Crop Improvement and Research Management Position.

PROJECT DIRECTORATE ON POULTRY, HYDERABAD

**382. Project Director (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Veterinary Science/ Animal Science. ii) & iii) As in Item No. 376(ii) & 376(iii) above. iv) Specialisation in Animal Production and experience of research in Poultry. *Desirable :* Experience in a Research Management Position.

PROJECT COORDINATOR, JOINT DIRECTOR AND HEAD OF DIVISION, Pay Scale : Rs. 16400-22400

CENTRAL RESEARCH INSTITUTE FOR DRYLAND AGRICULTURE, HYDERABAD

**383. Project Coordinator (Dryland Research) (One Post)**

*Qualifications Essential :* i) Doctoral degree in any field of Agricultural or related Science. ii) Principal Scientist in the scale of Rs. 16400-22400 or in an equivalent position. OR 8 years experience as a Senior Scientist (Rs. 12000-18300) or in an equivalent position. OR An eminent Scientist having proven record of scientific contribution working in a reputed organisation/ institute having at least 13 years experience in the relevant subject. iii) As in Item No. 376(iii) above. iv) Specialisation and experience of research in the field of rainfed eco-system.

ICAR RESEARCH COMPLEX FOR NEH REGION, BARAPANI

**384. Joint Director, ICAR Res. Complex for NEH Region, Nagaland Centre (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No. 383(ii) & 376(iii) above. iv) Specialisation and experience in research related to farming system approach for the problems of hilly regions.

CENTRAL POTATO RESEARCH INSTITUTE, SHIMLA

**385. Head, Central Potato Research Station, Shillong (One Post)**

*Qualifications Essential :* i) Doctoral degree in any branch of Agricultural Sciences. ii) & iii) As in Item No. 383(ii) & 376(iii) above. iv) Specialisation in the field of Potato/ Tuber Crops/ Vegetable and experience in production/ improvement of Potato.

CENTRAL SHEEP & WOOL RESEARCH INSTITUTE, AVIKANAGAR

**386. Head, Division of Animal Genetics & Breeding (One Post)**

*Qualifications Essential :* i) Doctoral degree in Animal Genetics & Breeding. ii) & iii) As in Item No. 383(ii) & 376(iii) above. iv) Specialisation and experience in the field of Animal Genetics and Breeding with respect to small ruminants.

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE, COCHIN

**387. Head, Division of Fisheries Environment & Management (One Post)**

*Qualifications Essential :* i) Doctoral degree in Marine Science/ Marine Fisheries/ Oceanography. ii) & iii) As in Item No. 383(ii) & 376(iii) above. iv) Specialisation and experience in Fisheries Oceanography and/or Marine Biology as evidenced by published papers in leading journals.

INDIAN VETERINARY RESEARCH INSTITUTE, IZATNAGAR

**388. Head, Division of Livestock Products Technology (One Post)**

*Qualifications Essential :* i) Doctoral degree in Livestock Products Technology/ Meat Science/ Meat Technology/ Dairy Technology/ Poultry Technology. ii) & iii) As in Item No. 383(ii) & 376(iii) above. iv) Specialisation and experience in the field of Livestock Products Technology.

INDIAN INSTITUTE OF SOIL SCIENCE, BHOPAL

**389. Head, Division of Soil Chemistry & Fertility (One Post)**

*Qualifications Essential :* i) Doctoral degree in Soil Science/ Agricultural Chemistry/ Chemistry with Doctoral Research based on work in Soil Chemistry/ Soil Fertility. ii) & iii) As in Item No. 383(ii) & 376(iii) above. iv) Experience of research work in the field of Soil Chemistry/ Soil Fertility/ Nutrient Management.

## PRINCIPAL SCIENTIST

Pay Scale : Rs. 16400-22400. Age : Below 50 years (There will be no maximum age limit for the ICAR employees. Relaxation to SC/ST candidates may be given in accordance with the orders issued by Govt. of India from time to time).

CENTRAL TUBER CROPS RESEARCH INSTITUTE, THIRUVANATHAPURAM

**390. Principal Scientist (Plant Pathology) (One Post)**

*Qualifications Essential :* i) Doctoral degree in Plant Pathology. ii) 10 (Ten) years experience excluding the period spent in obtaining the Ph.D. degree (subject to maximum of 3 years) in research/ teaching/ extension education provided 3 years experience is as a Senior Scientist (Rs. 12000-18300) or in an equivalent position. iii) As in Item No. 376(iii) above. iv) Specialisation in the field of pathological aspects of tropical tuber crops.

NATIONAL RESEARCH CENTRE FOR CITRUS, NAGPUR

**391. Principal Scientist (Horticulture) (PHT) (One Post)**

*Qualifications Essential :* i) Doctoral degree in Horticulture. ii) & iii) As in Item No. 390(ii) & 376(iii) above. iv) Specialisation in Fruit Crop research with emphasis on post harvest management aspects.

NATIONAL BUREAU OF PLANT GENETICS RESOURCES, NEW DELHI

**392. Principal Scientist, GEX Division (One Post)**

*Qualifications Essential :* i) Doctoral degree in the relevant field i.e. Economic Botany/ Botany/ Agril. Botany/ Genetics/ Plant Breeding/

Horticulture. ii) & iii) As in Item No. 390(ii) & 376(iii) above. iv) Specialisation and experience in PCR aspects techniques, management and regulation of national and international activities involved in plant introduction, exchange, documentation and dissemination of information of plant genetic resources of different agri-horticultural crops including transgenic materials.

#### **NATIONAL DAIRY RESEARCH INSTITUTE, KARNAL**

393. Chief Training Officer (Trainers Training Centre) (One Post)

**Qualifications Essential :** i) Doctoral degree in any branch of Dairy Science/ Animal Science/ Veterinary Science/ Extension or allied subjects. ii) & iii) As in Item No. 390(ii) & 376(iii) above. iv) Specialisation in Animal Production/ Animal Products Processing Technologies and Organising training programmes.

#### **SENIOR SCIENTIST**

**Pay Scale :** Rs. 12000-18300. **Age :** Below 45 years (There will be no maximum age limit for the ICAR employees, Relaxation to SC/ST candidates may be given in accordance with the orders issued by Govt. of India from time to time).

#### **CENTRAL INSTITUTE FOR COTTON RESEARCH, NAGPUR**

394. Senior Scientist (Agricultural Economics) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agricultural Economics. ii) 5 (Five) years experience (excluding the period spent in obtaining the Ph.D. degree, during service, subject to maximum of 3 years) in research/ teaching/ extension education as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. iii) As in Item No. 376(iii) above. iv) Specialisation and relevant experience in Cotton.

395. Senior Scientist (Biotechnology) (One Post)

**Qualifications Essential :** i) Doctoral degree in Biotechnology. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in the discipline with experience in latest techniques of plant molecular biology/ genetic engineering.

396. Senior Scientist (Agronomy) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agronomy. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation with relevant experience in Cotton.

397. Senior Scientist (Entomology) (One Post)

**Qualifications Essential :** i) Doctoral degree in Entomology. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in the discipline with relevant experience in Cotton Entomology preferably integrated pest management in Cotton.

398. Senior Scientist (Biochemistry) (One Post)

**Qualifications Essential :** i) Doctoral degree in Biochemistry. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation and relevant experience in modern techniques in Cotton Biochemistry.

399. Senior Scientist (Plant Breeding) (Two Posts)

**Qualifications Essential :** i) Doctoral degree in Plant Breeding. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation and relevant experience in latest cotton breeding methods.

#### **CENTRAL INSTITUTE FOR RESEARCH ON COTTON TECHNOLOGY, MUMBAI**

400. Senior Scientist (Agricultural Structure & Process Engg.) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agricultural Engineering with 5 years experience (excluding the period spent in obtaining the Ph.D. degree during service subject to a maximum of 3 years) in research/ teaching/ extension education as Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. OR Relaxation for Engineering Disciplines. Master's degree in Agricultural Structure & Process Engineering or equivalent with 8 years experience in research/ teaching/ extension education as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant process Engineering subject. ii) As in Item No. 376(iii) above. iii) Specialisation : Agricultural Processing. The applicants must have worked in the area of cotton ginning and be familiar with precleaning ginning machines.

#### **NATIONAL RESEARCH CENTRE ON CAMEL, BIKANER**

401. Senior Scientist (Vet. Medicine) (One Post)

**Qualifications Essential :** i) Doctoral degree in Veterinary Medicine. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation and relevant experience of having worked in the area of Veterinary Medicine.

#### **CENTRAL INSTITUTE OF AGRICULTURAL ENGINEERING, BHOPAL**

402. Senior Scientist (Soil and Water Conservation Engineering) (One Post)

**Qualifications Essential :** i) Doctoral degree in Soil Water Conservation Engg./Irrigation and Drainage Engineering with 5 years experience (excluding the period spent in obtaining the Ph.D. degree during service subject to a maximum of 3 years) in research/ teaching/ extension education as Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. OR Master's degree in Agricultural Engineering with specialisation in Soil & Water Conservation Engineering/ Irrigation and Drainage Engg. with 8 years experience in research/ teaching/ extension education/ manufacturing as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. ii) As in Item No. 376(iii) above. iii) Specialisation and experience in designing and testing of irrigation equipment.

#### **INDIAN INSTITUTE OF PULSES RESEARCH, KANPUR**

403. Senior Scientist (Computer Application in Agriculture) (One Post)

**Qualifications Essential :** i) Doctoral degree in Computer Application/ Computer Science/ Engineering (any branch)/ Mathematics/ Statistics/ Agricultural Statistics with 4 years experience (excluding the period spent in obtaining the Ph.D. degree during service subject to a maximum of 3 years) in research/ teaching/ extension education as Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. OR Master's degree in Engineering (any branch) with 8 years experience in research/ teaching/ extension education as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant engineering subject. ii) As in Item No. 376(iii) above. iii) Experience in Application Software and Computer Networking.

#### **NATIONAL RESEARCH CENTRE FOR WEED SCIENCE, JALALPUR**

404. Senior Scientist (Agronomy) (One Post)

**Qualifications Essential :** i) Doctoral degree in the discipline of Agronomy. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Relative specialisation and relevant experience in Weed Science cognate to job requirement under essential qualifications.

#### **INDIAN LAC RESEARCH INSTITUTE, RANCHI**

405. Senior Scientist (Agricultural Structure & Process Engg.) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agricultural Engineering with 5 years experience (excluding the period spent in obtaining the Ph.D. degree during service subject to a maximum of 3 years) in research/ teaching/ extension education as Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. OR Master's degree in Agricultural Structures & Process Engineering with 8 years experience in research/ teaching/ extension education/ as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. ii) As in Item No. 376(iii) above. iii) Specialisation and experience in the field of post harvest technology/ pilot plant studies/ design of process equipments preferably in the field of resins/ polymers/ paints etc.

#### **CENTRAL POTATO RESEARCH INSTITUTE, SHIMLA**

406. Senior Scientist (Agricultural Statistics) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agricultural Statistics. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Experience in Statistical studies in horticultural crops.

407. Senior Scientist (Seed Technology) (One Post)

**Qualifications Essential :** i) Doctoral degree in Seed Technology/ Agronomy/ Horticulture. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in Seed Production/ Micropropagation/ Seed Agronomy of Potato/ Tuber Crops/ Vegetables.

408. Senior Scientist (Soil Science/ Soil Chemistry/ Fertiliser/ Microbiology) (Two Posts)

**Qualifications Essential :** i) Doctoral degree in Soil Science/Soil Microbiology. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in Soil Fertility evaluation and fertilizer use in potato/other crops.

409. Senior Scientist (Plant Physiology) (One Post)

**Qualifications Essential :** i) Doctoral degree in Plant Physiology. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in research/ experience in abiotic stresses and other physiological aspects of potato/ tuber crops/ vegetables.

410. Senior Scientist (Biotechnology) (One Post)

**Qualifications Essential :** i) Doctoral degree in Biotechnology/ Genetics/ Botany. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in biotechnology of horticultural crops.

411. Senior Scientist (Microbiology-Plant Science) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agricultural Microbiology. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in post harvest microbiology/ industrial microbiology/ plant microbiology.

412. Senior Scientist (Plant Breeding) (Two Posts)

**Qualifications Essential :** i) Doctoral degree in Plant Breeding/ Genetics. ii) & iii) As in Item No. 394(ii) & 376(iii) above. iv) Specialisation in breeding of potato/ tuber crops.

#### **ICAR RESEARCH COMPLEX FOR NEH REGION, BARAPANI**

413. Senior Scientist (Farm Machinery & Power) (One Post)

**Qualifications Essential :** i) Doctoral degree in Farm Machinery & Power with 5 years experience (excluding the period spent in obtaining the Ph.D. degree during service subject to a maximum of 3 years) in research/ teaching/ extension education as Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. OR Master's degree in Agricultural Engineering with 8 years experience in research/ teaching/ extension education as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant Engineering subject. ii) As in Item No. 376(iii) above. iii) Specialisation in the field of Farm Machinery & Power.

414. Senior Scientist (Agricultural Engineering) (One Post)

**Qualifications Essential :** i) Doctoral degree in Agricultural Engg. with 5 years experience (excluding the period spent in obtaining the Ph.D. degree during service subject to a maximum of 3 years) in research/ teaching/ extension education as Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant subject. OR Master's degree in Agril. Engineering discipline with 8 years experience in research/ teaching/ extension education as a Scientist (Rs. 2200-4000) (pre-revised) or in an equivalent position in the relevant Engineering subject. ii) As in Item No. 376(iii) above. iii) Specialisation in Post Harvest Technology of Agricultural Produce.

**IMPORTANT NOTE :** 1) The candidates selected for appointment to the posts in Animal Science disciplines and possessing degree in Veterinary Science/ Veterinary Science and Animal Husbandry followed by Masters and Doctoral degree in the relevant discipline will also be entitled to non-practising allowance as admissible under the rules from time to time subject to fulfilment of conditions of entitlement for the same as prescribed by the Council. 2) The posts appearing at Sl. No. 375 to 389 will be filled up on tenurial basis for a period of five years. However, retirement age for all Scientific posts is 60 years. 3) Candidate who have already applied for the post appearing at Sl. No. 382 in response to previous advertisement of ASRB, must also send fresh application. The fee already paid by the candidate alongwith the earlier application will be adjusted against their application for the post appearing at Sl. No. 382. To facilitate this they are advised to indicate the particulars of the fee already paid in the relevant column of the application form.

**CLOSING DATE FOR RECEIPT OF APPLICATIONS IN AGRICULTURAL SCIENTISTS RECRUITMENT BOARD IS 08.02.2000**

(For candidates from abroad and in the Andaman and Nicobar Islands, Lakshadweep, Minicoy and Amindivi Islands, States/ Union Territories in the North-Eastern Region, Ladakh division of J&K State, Sikkim, Pangi, Sub-division of Chamba, Lahul and Spiti, districts of Himachal Pradesh, last date will be 23.02.2000).

**GENERAL INSTRUCTIONS :** 1. For application form, please write to the Secretary, Agricultural Scientists Recruitment Board, Krishi Anusandhan Bhawan, Pusa, New Delhi-110 012. Request for form must specify Advertisement No. and name of the post and item No. and should be accompanied by self addressed unstamped envelop (23x10 cms size). 2. Separate application with separate fee, separate No Objection Certificate, separate Vigilance Clearance Certificate is required for each post. 3. Application form complete in all respects, should reach the Office of the ASRB together with the application fee of Rs. 50/- (No fee for SC/ ST candidates) in the form of crossed Demand Draft Only drawn in favour of the Secretary, Agricultural Scientists Recruitment Board payable at New Delhi (with the name and address of the candidate written on its back) by the closing date. Applications received after the closing date will not be entertained. In case a candidate anticipates delay in forwarding of his application through proper channel, he must send an advance copy of the application alongwith the fee which must reach this office on or before the closing date. The date of the Bank Draft should not be prior to the date of issue of the advertisement in the Newspapers and the same should be valid

for a period of six months. Bank Drafts valid for three months will not be accepted. 4. The candidates should fill each and every column of Application Form at the appropriate place. Wherever the space is not sufficient they could add extra sheet but it should be strictly in the prescribed format. 5. Candidates abroad may apply on plain paper and send their applications together with an International Postal Order/ Bank draft covering the application fee drawn in favour of the Secretary, Agricultural Scientists Recruitment Board so as to reach this office of ASRB by the closing date. In countries where regular commercial channels are not available, the candidates can deposit the application fee in local currency with the Indian Mission/ Posts abroad, who in turn will issue an R.B.I. draft in favour of the Secretary, Agricultural Scientists Recruitment Board, New Delhi. 6. The prescribed Essential Qualifications are minimum and possessing of same does not entitle candidates to be called for interview. Where the number of applicants is large, the Board may restrict the number of candidates for interview to a reasonable limit on the basis of qualifications and experience higher than the minimum prescribed in the advertisement. 7. If required, candidates must appear for personal interview. 8. Higher initial pay may be recommended by the ASRB for specially qualified and experienced candidates for all the posts. 9. For all technical posts and other non-scientific positions a screening test may be conducted by the Board to be followed by an interview. 10. T.A. contribution will be admissible to those called for interview as per ICAR Rules. 11. Crucial date for determining the age limit for candidates will be the closing date for receipt of applications from candidates in India. 12. The option of use of Hindi in interviews exists in the Board. 13. Convassing in any form will disqualify a candidate.

**CORRIGENDUM**

1. Reference ASRB Advertisement No. 4/99 which appeared in the Employment News/Rozgar Samachar and other Newspapers dated 3-10/7/1999. The post of Project Director, Project Directorate on Poultry, Hyderabad (Item No. 103) stands withdrawn due to administrative reasons. The fee already paid by the candidates alongwith their earlier applications will be adjusted against their applications for the post appearing at Sl. No. 382. To facilitate this they are advised to indicate the particulars of the fee already paid in the relevant column of the application form. Other contents remain unchanged.

2. Reference ASRB Advertisement No. 7/99 which appeared in the Employment News/Rozgar Samachar and other Newspapers dated 04.12.1999 to 11.12.1999. The Essential Qualification No. (iv) for the post of Senior Scientist (Horticulture) at NRC for Arid Horticulture, Bikaner (Item No. 338) may be read as : Specialisation in Horticultural Crops preferably Fruit Crops. Other contents remain unchanged.

**APPLICATION FEE REVISED TO Rs. 50/-** dasp 1020(21) 99



**MDI**

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**Fellow Programme in Management  
Beginning July 2000**

The Fellow Programme in Management (FPM) is a doctoral level programme of MDI. The objective of the Fellow Programme is to provide high quality management education to bright young men and women who wish to pursue a career in research, teaching and training in the field of management. MDI is looking for candidates with a good academic background, professional accomplishments and a strong urge to contribute to the process of knowledge creation and dissemination in the field of management.

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**How to apply :** Obtain FPM Prospectus and application form free of cost from MDI. The last date for receipt of completed application form is 31 January, 2000.

For more  
information,  
please contact

The Chief Administrative Officer (Graduate Programmes)

**MANAGEMENT DEVELOPMENT INSTITUTE**

Mehrauli Road, Sukhrali, GURGAON-122 001. Phone : (91-124) 340153, 340173, 349831-836, 346760-62, 346162-64;  
Fax : (0124)342244, 341189 E-mail: fpm@mdi.ac.in Website: <http://www.mdi.ac.in>

Advt. No. 9/99

Applications are invited for the following Scientific posts under the different Institutes and the Headquarters of the Indian Council of Agricultural Research, New Delhi.

**ASSISTANT DIRECTORS GENERAL, DIRECTORS AND PROJECT DIRECTOR**  
Pay Scale : Rs. 16400-450-20900-500-22400 (Minimum pay to be fixed at 17300 on initial appointment)

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH HEADQUARTERS, NEW DELHI**

**415. Assistant Director General (Soils) (One Post)**

**Qualifications Essential :** i) Doctorate degree in any branch of Soil Science. ii) At least 5 years experience as a Principal Scientist (Rs. 16400-22400) or in an equivalent position. OR An eminent Scientist having proven record to scientific contribution working in a reputed organisation/ institute having atleast 18 years experience in the relevant subject. iii) Evidence of contribution to Research/ Teaching/ Extension Education as supported by published work/ Innovations. iv) Specialisation in any field related to soil management. **Desirable :** Experience in a Research Management Position.

**416. Assistant Director General (Marine Fisheries) (One Post)**

**Qualifications Essential :** i) Doctoral degree in Fish and Fishery Science/ Mariculture/ Fishery Technology/ Zoology/ Marine Biology with specialisation in fisheries or in allied subject. ii) & iii) As in Item No. 415(ii) & 415(iii) above. iv) Specialisation and experience of research in the field of Marine Fisheries. **Desirable :** Experience in a Research Management Position.

**CENTRAL INSTITUTE OF SUB-TROPICAL HORTICULTURE, LUCKNOW**

**417. Director (One Post)**

**Qualifications Essential :** i) Doctoral degree in Horticulture or other allied disciplines. ii) & iii) As in Item No. 415(ii) & 415(iii) above. iv) Specialisation in research of fruit crops. **Desirable :** Experience in a Research Management Position.

**NATIONAL RESEARCH CENTRE FOR ORCHIDS, PAKYONG, GANGTOK, SIKKIM**

**418. Director (One Post)**

**Qualifications Essential :** i) Doctoral degree in Horticulture/ Floriculture. ii) & iii) As in Item No. 415(ii) & 415(iii) above. iv) Research/ teaching experience in Floriculture as evidenced by published papers. **Desirable :** Experience in a Research Management Position.

**NATIONAL BUREAU OF PLANT GENETIC RESOURCES, NEW DELHI**

**419. Project Director, NRC on DNA Finger Printing (One Post)**

**Qualifications Essential :** i) Doctoral degree in Plant Breeding/ Botany/ Molecular Biology/ Agril. Botany/ Biochemistry/ Genetics/ Plant Biotechnology. ii) & iii) As in Item No. 415(ii) & 415(iii) above. iv) Specialisation in Plant Biotechnology. **Desirable :** Experience in a Research Management Position.

**IMPORTANT NOTE :** 1) The candidates selected for appointment to the posts in Animal Science disciplines and possessing degree in Veterinary Science/ Veterinary Science and Animal Husbandry followed by Masters and Doctoral degree in the relevant discipline will also be entitled to non-practising allowance as admissible under the rules from time to time subject to fulfilment of conditions of entitlement for the same as prescribed by the Council. 2) All posts appearing from Sl. No. 415 to 419 will be filled up on tenurial basis for a period of five years. However, retirement age for all Scientific posts is 60 years.

**CLOSING DATE FOR RECEIPT OF APPLICATIONS IN AGRICULTURAL SCIENTISTS RECRUITMENT BOARD IS 08.02.2000**

(For candidates from abroad and in the Andaman and Nicobar Islands, Lakshadweep, Minicoy and Amindivi Islands, States/ Union Territories in the North-Eastern Region, Ladakh division of J&K State, Sikkim, Pangi, Sub-division of Chamba, Lahul and Spiti, districts of Himachal Pradesh, last date will be 23.02.2000).

**GENERAL INSTRUCTIONS :** 1. For application form, please write to the Secretary, Agricultural Scientists Recruitment Board, Krishi Anusandhan Bhawan, Pusa, New Delhi-110 012. Request for form must specify Advertisement No. and name of the post and Item No. and should be accompanied by self addressed unstamped envelop (23x10 cms size). 2. Separate application with separate fee, separate No Objection Certificate, separate Vigilance Clearance Certificate is required for each post. 3. Application form complete in all respects, should reach the Office of the ASRB together with the application fee of Rs. 50/- (No fee for SC/ ST candidates) in the form of crossed Demand Draft Only drawn in favour of the Secretary, Agricultural Scientists Recruitment Board payable at New Delhi (with the name and address of the candidate written on its back) by the closing date. Applications received after the closing date will not be entertained. In case a candidate anticipates delay in forwarding of his

application through proper channel, he must send an advance copy of the application alongwith the fee which must reach this office on or before the closing date. The date of the Bank Draft should not be prior to the date of issue of the advertisement in the Newspapers and the same should be valid for a period of six months. Bank Drafts valid for three months will not be accepted. 4. The candidates should fill each and every column of Application Form at the appropriate place. Wherever the space is not sufficient they could add extra sheet but it should be strictly in the prescribed format. 5. Candidates abroad may apply on plain paper and send their applications together with an International Postal Order/ Bank draft covering the application fee drawn in favour of the Secretary, Agricultural Scientists Recruitment Board so as to reach this office of ASRB by the closing date. In countries where regular commercial channels are not available, the candidates can deposit the application fee in local currency with the Indian Mission/ Posts abroad, who in turn will issue an R.B.I. draft in favour of the Secretary, Agricultural Scientists Recruitment Board, New Delhi. 6. The prescribed Essential Qualifications are minimum and possessing of same does not entitle candidates to be called for interview. Where the number of applicants is large, the Board may restrict the number of candidates for interview to a reasonable limit on the basis of qualifications and experience higher than the minimum prescribed in the advertisement. 7. If required, candidates must appear for personal interview. 8. Higher initial pay may be recommended by the ASRB for specially qualified and experienced candidates for all the posts. 9. For all technical posts and other non-scientific positions a screening test may be conducted by the Board to be followed by an interview. 10. T.A. contribution will be admissible to those called for interview as per ICAR Rules. 11. Crucial date for determining the age limit for candidates will be the closing date for receipt of applications from candidates in India. 12. The option of use of Hindi in interviews exists in the Board. 13. Convassing in any form will disqualify a candidate.

**Application Fee Revised to Rs. 50/-**

davp 1020(22)/99

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# CLASSIFIED ADVERTISEMENTS

## NATIONAL INSTITUTE OF NUTRITION

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**RESEARCH OFFICER (Communication & Journalism) (Unreserved)**

Scale of Pay of Rs. 8,000-275-13,500/- plus admissible allowances as per ICMR rules.

### Qualification & Experience :

**Essential :** First Class Master's Degree in Communication & Journalism/Life Sciences with exposure in communication in Health & Nutrition/Extension with exposure in Health & Nutrition.

**Desirable :** Three years experience in Research/writing of popular health related articles. Proficiency in English/Telugu/Hindi.

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To assist the division in publication of periodicals and other popular health related publications.

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Applications from employees working in Central/State Government Departments/Public Sector Undertaking and Government funded research agencies must be forwarded through proper channel.

**How to apply :** The prescribed application form for the above mentioned post can be obtained from Director, National Institute of Nutrition, Hyderabad. The filled in application forms together with attested copies of certificates including caste certificate and testimonials along with a crossed IPO for Rs. 8/- (SC/ST/Departmental Candidates are exempted) drawn in favour of Director, National Institute of Nutrition, Jamal Osmania (P.O.), Hyderabad-500 007, should be sent so as to reach this Office on or before 10.02.2000. Incomplete applications, and applications that are received after the closing date or without IPO will not be entertained.

## ADVERTISEMENT WANTED

1. Lecturer in Arabic (Two posts)

Qualifications as prescribed by Kannur University for Arabic Colleges. Apply within 30 days to Manager, Nuzrathul Islam Arabic College, Kadavathur, P.O. Kannur, Dt. Kerala.

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No.Ad.T/400/99/SSUS 15.12.99

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Applications in the prescribed form are invited from eligible candidates for appointment as Professor in the scale of pay of Rs. 4500-7300 (pre-revised) in the University for the following subjects.

1. Sanskrit Sahitya 2. Sanskrit Nyaya  
3. Sanskrit Vyakarana 4. Sanskrit Vedanta  
5. Malayalam 6. Hindi 7. Philosophy 8. History 9. Social Work 10. Education

### Qualifications

An eminent scholar with published work of high quality, actively engaged in research with 10 years experience in postgraduate teaching and/or research at University/national level institutions including experience or guiding research at doctoral level.

### OR

An outstanding scholar with established reputation who has made significant contribution to knowledge.

### Age

Not more than 50 years as on 1.1.99.

### Number of vacancies

One in each subject.

### Instructions

- Relaxation in age and reservation in appointment as per rules in force.
- Last date for receipt of filled in applications will be 25.1.2000.
- Application forms can be had on payment of Rs. 100 (25 for SC/ST) in the cash counter or by sending request with Demand Draft to the Joint Registrar Administration with a self-addressed stamped envelope for Rs. 6 till 15.1.2000.
- Applications completed in all respects should be sent along with the registration fee of Rs. 500 (125 for SC/ST).

e. Demand Draft should be drawn in favour of Joint Registrar Finance payable at the Union Bank, Kalady.

f. There should be separate application for each subject.

Dr. K.G. Paulose  
REGISTRAR

## VIDYASAGAR UNIVERSITY MIDNAPORE-721 102

Employment Notification No. VU/R/Adv/8/99

Applications are invited on prescribed form (price Rs. 10, available at University Cash Counter on weekdays for following posts on or before 20.01.2000 with Bank Draft payable at Midnapore of Rs. 100, 75, 50 respectively.

- Professor [Rs. 16400-22400] : (1) History (Desirable specialisation : Modern History)
- Controller of Examinations [Rs. 16400-22400],
- Finance Officer [Rs. 16400-22400],
- Deputy Registrar (reserved for SC) [Rs. 12000-18300],
- Deputy Librarian (reserved for SC) [Rs. 12000-18300],
- Lecturer [Rs. 8000-13500] : (a) Philosophy (reserved for SC) [specialisation : Vedanta/Nyaya], (b) Zoology (reserved for SC) [specialisation : Animal Physiology/Parasitology/Development Biology/Immunology], (c) Industrial Chemistry (reserved for SC), (d) Comparative Literature (reserved for ST).

**Essential Qualifications for :** 1 & 6 as per revised UGC norms (NET/SLET for Lecturership) (furnished with the application form), for 2, 3, 4 & 5 as per WB Govt. norms (furnished with application form).

REGISTRAR

## KEYI SAHIB TRAINING COLLEGE TALIPARAMBA, KANNUR KERALA-670 142

### WANTED

Applications are invited for the following posts :

- Lecturer in Hindi : Permanent vacancy
- Lecturer in Education : Leave vacancy (Age & Qualifications as per University and Government Rules)

Application form can be had from the office on payment of Rs. 100/- (Rs. 110/- by MO or DD) from the office. Application should reach the office within 30 days of this notification.

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**Assistant Professors :** (Rs. 10000-15200); A Ph.D. or equivalent research / published work with a first or high second class Master's Degree in the relevant area preferably with 5 years experience in Teaching / Consultancy/ Industry.

**Lecturers :** (Rs. 8000-13500); A first or high second class Master's Degree in the relevant area.

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